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us-09-880-503-9.rapb

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APPLICANT: CINES, Douglas B
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd AJ-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR PLILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 554; DB 10; Length 411; 100.0%; Pred. No. 5.6e-56;
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Fatent No. US20020106775A1
GENERAL INPORMATION:
APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Marekin, Jack
APPLICANT: Smith, Richard A.
APPLICANT: Severin, Jack
APPLICANT: Severin, Joan M.
APPLICANT: Beverin, Jean M.
APPLICANT: Genzin, Jean M.
APPLICANT: Genzin, Jean M.
APPLICANT: Genzin, Jean M.
APPLICANT: Holzman, Thomas F.
TITLE OF INVENTION: HIGHLY CRYSTALLINE UROKINASE
FILE REFERENCE: 6310.US.Pl
CURRENT FILING DATE: 1999-03-05
PRIOR PILLICATION NUMBER: US 09/036,361
PRIOR PILLICATION NUMBER: US 09/036,361
NUMBER OF PLICATION NOWER: US 09/036,361
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 431
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OTHER INFORMATION: Xaa = any amino acid
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LOCATION: (279)...(279)
OTHER INFORMATION: Xaa = any amino acid
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LOCATION: (1)...(20)
OTHER INFORMATION: Leader sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Ver. 2.1 SEQ ID NO 3
                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
     GENERAL INFORMATION:
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LOCATION: (302)...
                                                                                                                                                                                                                                                                                                                                     411
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US-09-264-468B-1
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TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
FILE REPERENCE: PAGGSP1
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-11-03
NUMBER: OF SEQ ID NOS: 8564
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Patent No. US20020131964A1
GENERAL INFORMATION:
APPLICANT: CINES, Douglas B
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT APPLICATION NUMBER: US 60/212,847
PRIOR PILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 8
LENGTH: 143
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 554; DB 10; Length 143;
Best Local Similarity 100.0%; Pred. No. 1.7e-56;
Matches 96; Conservative 0; Mismatches 0; Indels 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Ver. 3.0
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; ORGANISM: Homo sapiens
US-10-106-698-6266
                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
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US-10-106-698-6266
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SEQ ID NO 6266
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US-09-880-503-3
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68 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGGKHNYCRNPDN 127
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                                                                                                                                                                                                                                                                                                                                                                                                         1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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APPLICANT: Chen, Yan
APPLICANT: Chen, Yan
APPLICANT: Chen, Xun
APPLICANT: Chen, Xunc
APPLICANT: Kamatkar, Shubhangi
APPLICANT: Kamatkar, Shubhangi
APPLICANT: Glatt, Karen
APPLICANT: Glatt, Maren
APPLICANT: Glatt, Maniula
APPLICANT: Hoersh, Sebastian
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY
                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                                                                              Match 100.0%; Score 554; DB 12; Length 431; Local Similarity 100.0%; Pred. No. 5.9e-56; les 96; Conservative 0; Mismatches 0; Indels 0;
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; Sequence 2, Application No. US20020193304A1
; Publication No. US20020193304A1
; GENERAL INFORMATION;
; APPLICANT: WADA, NAVABU
; TITLE OF INVENTION: ANTI-HIV AGENTS
; TILE REFERENCE: HAYAK-9
; CURRENT FILING DATE: 2002-05-17
; PRIOR PPLICATION NUMBER: UF 2001-42655
; PRIOR APPLICATION NUMBER: JP 2001-42655
; PRIOR APPLICATION NUMBER: JP 2001-184284
; PRIOR PELING DATE: 2001-02-20
; PRIOR PLING DATE: 2001-06-19
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn Ver. 2.1
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PRIOR FILING DATE: 1999-12-29
NUNBER OF SEQ ID NOS: 60
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 21
LENGTH: 431
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                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
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APPLICANT: Gaillemette, Tracy L.
APPLICANT: Gaillemette, Enubhangi
APPLICANT: Sanatkar, Shubhangi
APPLICANT: Schlegel, Robert
APPLICANT: Schlegel, Robert
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, THERAPY OF COLON CANCER
FILE REFERENCE: MPMO1-029P2RNM
FILE REFERENCE: MPMO1-029P2RNM
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/381,978
PRIOR FILING DATE: 2002-03-05
NUMBER OF SEQ ID NOS: 228
SOUTHARE RESEREE FASTSEQ FOR Windows Version 4.0
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                                        68 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 127
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          1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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APPLICANT: Davies, Michael J
APPLICANT: Fish, Paul
APPLICANT: Huggins, Jonathan P
APPLICANT: Huggins, Jonathan P
APPLICANT: McIntosh, Fraser S
APPLICANT: Occleston, Nicholas L
TITLE OF INVENTION: Composition
FILE REPERENCE: PCS 10391A
CURRENT APPLICATION NUMBER: US/10/131,985
CURRENT FILING DATE: 2002-04-25
PRIOR APPLICATION NUMBER: US/09/726,295
PRIOR APPLICATION NUMBER: GB 9930768.8
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Millennium Pharmaceuticals, Inc.
                                                                                                                                                                                                                                                                                                                                                Sequence 161, Application US/10301822; Publication No. US20030148410A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo Sapiens
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US-10-247-671-149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-407-821-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
100.0%; Score 554; DB 15; Length 431;
Best Local Similarity 100.0%; Pred. No. 5.9e-56;
Matches 96; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: NUCLEARING.
APPLICANT: HOLMDAHL, Rikard
APPLICANT: HOLMDAHL, Rikard
APPLICANT: L1, Janan
TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
FILE REFERENCE: 3810/13577-US3
CURRENT PELLING DATE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,490
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: 2001-07-10
PRIOR APPLICATION NUMBER: 2001-07-13
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTIN VERSION 3.1
FROM TARGET SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 RRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEE 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 RRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPRE 96
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DATABASE ACCESSION NUMBER: GenBank / P00749
DATABASE ENTRY DATE: 1986-07-21
RELEVANT RESIDUES: (1)..(431)
FILE REFERENCE: MRI-035
CURRENT APPLICATION NUMBER: US/10/17,311
CURRENT APPLICATION NUMBER: US/10/17,311
PRIOR APPLICATION NUMBER: US 60/298,159
PRIOR FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/298,155
PRIOR FILING DATE: 2001-06-13
PRIOR FILING DATE: 2001-06-13
PRIOR FILING DATE: 2001-11-14
NUMBER OF SEQ ID NOS: 238
SOFTWARE: FASESEQ FOR WINDOWS VERSION 4.0
SEQ ID NO 184
LENGTH: 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 4, Application US/10193656; Publication No. US20030096733A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0
Matches 96; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens
US-10-171-311-184
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Sequence 2, Application US/10407821
| Publication No. US20030219386A1
| Publication No. US20030219386A1
| GENERAL INFORMATION |
| APPLICANT: IDELL, STEVEN |
| TITLE OF INVENTION: INTRABLEBURAL SINGLE-CHAIN UROKINASE ALONE OR COMPLEXED |
| TITLE OF INVENTION: ADHESIONS IN TETRACYCLINE-INDUCED PLEURITIS IN RABBITS |
| TITLE OF INVENTION: ADHESIONS IN TETRACYCLINE-INDUCED PLEURITIS IN RABBITS |
| TITLE OF INVENTION: WITHOUT US/10/407,821 |
| CURRENT APPLICATION NUMBER: 60/414,202 |
| PRIOR PEDICATION NUMBER: 60/414,202 |
| PRIOR PEDICATION NUMBER: 60/414,202 |
| PRIOR FILING DATE: 2002-09-27 |
| PRIOR FILING DATE: 2002-04-05 |
| NUMBER OF SEQ ID NOS: 3 |
| SOSTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 98.2%; Score 544; DB 12; Length 411; Best Local Similarity 99.0%; Pred. No. 8.1e-55; Matches 95; Conservative 0; Mismatches 1; Indels (
US-10-247-671-149

| Sequence 149, Application US/10247671
| Sequence 149, Application US/10247671
| Sequence 149, Application US/10247671
| Publication No. US20030194721A1
| APPLICANT: Mikita, Thomas
| APPLICANT: Mikita, Thomas
| APPLICANT: Mikita, Thomas
| APPLICANT: Matthew R. |
| TITLE OF INVENTION: GENES EXPRESSED IN TREATED FOAM CELLS
| TITLE REPERBNCE: PA-0050 US
| CURRENT FILING DATE: 2002-09-18
| PRIOR APPLICATION NUMBER: 60/323,784
| PRIOR FILING DATE: 2001-09-19
| NUMBER OF SEQ ID NOS: 186
| SEQ ID NO 149
| LENGTH: 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No. US20030194721A1 1453334CD1
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Matches 95; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo sapiens
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TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
TYPE: amino acids
                                                                         Sequence 12, Application US/09984186; Patent No. US20020151011A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 19426
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88; Conservative
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                                                       US-09-984-186-12
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US-10-237-667-12
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                                                                                                                              Sequence 1, Application US/09880503

Patent No. US20020131964A1

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND TITLE OF INVENTION: TISSUE CONTRACTABLILITY
TITLE OF INVENTION: US/09/880,503

TITLE OF INVENTION NUMBER: US/09/880,503

CURRENT APPLICATION NUMBER: US 60/212,847

PRIOR FILING DATE: 2000-06-20

NUMBER OF SEQ ID NOS: 18

SOSTWARE: PATENTIN VET. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/09880503
Sequence 4, Application US/09880503
Patent No. US20020131964A1
GENERAL INFORMATION:
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PatentIn Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHYCRNPDN 60
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92.1%; Score 510; DB 10; Length 135;
Best Local Similarity 100.0%; Pred. No. 2.1e-51;
Matches 88; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
108 RRRPWCYVQVGLKLLVQECMVHDCADGKKPSSPPEE 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 92.1%; Score 510; DB 10;
Best Local Similarity 100.0%; Pred. No. 1.3e-51;
Matches 88; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 4
LENGTH: 135
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-880-503-4
                                                                                                                      US-09-880-503-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-880-503-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
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PREPARATION THERROP AND PHARMACEUTICAL COMPOSITION CONTAINING SAID POLYPEPTIDES, CONTAINING SAID POLYPEPTIDES COMPOSITION CORRESPONDENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STREET: 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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APPLICANT: Fleer, Reinhard
Pournier, Alain
Guitton, Jean-Dominique
Jung, Jearad
Yen, Patrice
TILE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
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                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/984,186
FILING DATE: 29-Oct-2001
CLASSIFICATION «UNKnown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 12, Application US/10237667; Publication No. US20030022308A1
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Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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NUMBER OF SEQUENCES: 36
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
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100.0%; Pred. No. 2.1e-51;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-UUL-1994
APPLICATION NUMBER: FR 92/01064
APPLICATION NUMBER: FT 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: SMICH Ph.D., Julie K.
REGISTRATION NUMBER: P.38,619
REFERENCE/DOCKET NUMBER: ST92006-US
                                                                                                                                                                                                                                                        ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,708
FILING DATE: 10-56P-2002
CLASSIFICATION: CURROWN>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            111 RRRPWCYVQVGLKPLVQECMVHDCADGK 138
                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSE: Rhone-Poulenc Rorer
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TOPOLOGY: linear; MOLECULE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 12: US-10-237-708-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 12, Application US/10237866; Publication No. US20030036171A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 138 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Fleer, Reinhard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
Matches 88; Conservative
                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 18
US-10-237-866-12
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                         APPLICANT: Fleer, Reinhard
APPLICANT: Fleer, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
CONTAINING SAID POLYPEPTIDES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.1%; Score 510; DB 15;
100.0%; Pred. No. 2.1e-51;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith Pb.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELEPONNUICATION INFORMATION:
TELEPONNUICATION 1NFORMATION:
TELEPONNE (610) 454-3839
INFORMATION POR SEC 1D 06:12:
                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: Macintosh
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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Publication No. US20330036170A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
FORMINER, Alain
Guitton, Jean-Dominique
Jung, Gerard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 10-Sep-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                  ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 138 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                             NUMBER OF SEQUENCES: 36
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                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                            STATE: PA
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US-10-237-708-12
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Gaps

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PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION CONTAINING SAID POLYPEPTIDES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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| Sequence 12, Application US/10237624
| Publication No. US20030082747A1
| GENERAL INFORMATION:
| APPLICANT: Fleer, Reinhard Fournier, Alain Guitton, Jean-Dominique Jung, Gerard Jung, Gerard Jung, Gerard Jung, Patrice Yeh, Patrice | Yeh, Patri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.1%; Score 510; DB 15; Length 138; Best Local Similarity 100.0%; Pred. No. 2.1e-51; Matches 88; Conservative 0; Mismatches 0; Indels (
                                                                                                                         CURRENT AFEL TO PER CONDUCED COMPUTER: Macintosh System 7.1 SOFTWARE: Word 5.1 (Patentin) CURRENT APPLICATION DATA: APPLICATION NUMBER: US/10/237,871 FILING DATE: 10-Sep-2002 CLASSIFICATION TOWNER: US/08/797,689 FILING DATE: 31-3AN-1997 APPLICATION NUMBER: US/08/256,927 FILING DATE: 28-UD-1994 APPLICATION NUMBER: FR 92/01064 FILING DATE: 28-UD-1994 APPLICATION NUMBER: FR 92/01064 FILING DATE: 28-JAN-1993 ATTORNEY/AGENT INFORMATION: NAME: Smith Ph.D., Julie K. REGISTRATION NUMBER: PS 392006-US REFERENCE/DOCKET NUMBER: P39,619 TELECOMMUNICATION NUMBER: P39,619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Rhone-Poulenc Rorer Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     111 RRRPWCYVQVGLKPLVQECMVHDCADGK 138
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ 1D NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                             ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 138 amino acids
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
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COUNTRY: USA
COUNTRY: USA
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PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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Pred. No. 2.1e-51;
                                                                                                                                                                                                                                                                                                          CURRENT TIES: TOPPY GIEN
COMPUTER: Macintosh
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,866
FILING DATE: 10-Sep-2002
CLASSIPICATION: «Unknown»
PRIOR APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
APPLICATION NUMBER: US 08/256,927
APPLICATION NUMBER: PF 92/01064
FILING DATE: 28-UUL-1994
APPLICATION NUMBER: PT/FR93/00085
FILING DATE: 31-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith Ph.D. Julie K.
REGISTRATION NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3899
TELEPHONE: (610) 454-3809
INFORMATION FOR SED ID NO: 12:
SEQUENCE CHEACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                    ADDRESSEE: Rhone-Poulenc Rorer Inc
STREET: 500 Arcola Road, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
92.1%; Score 510; DE
Best Local Similarity 100.0%; Pred. No. 2.1
Matches 88; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           111 RRRPWCYVQVGLKPLVQECMVHDCADGK 138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY: linear; MOLECULE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 12: US-10-237-866-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
                                                                                                                                    STATE: PA
COUNTRY: USA
ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/10237871
Publication No. US20030036172A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 138 amino acids TYPE: amino acid
                                                                                                          CITY: Collegeville
       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 19
US-10-237-871-12
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APPLICANT: Manosroi, Aranya
APPLICANT: Manosroi, Jiradej
APPLICANT: Manosroi, Jiradej
APPLICANT: Tayagiwatana, Chatchai
APPLICANT: Tayagiwatana, Chatchai
APPLICANT: Werner, Rolf-Guenther
TITLE OF INVENTION: Methods for Large Scale Protein Production in Prokaryotes
TITLE OF INVENTION: Methods for Large Scale Protein Production in Prokaryotes
FILE REPRENCE: 0652.2180001
CURRENT APPLICATION NUMBER: US/09/987,457
CURRENT PRILING DATE: 2001-02-15
PRIOR FILING DATE: 2001-02-15
PRIOR FILING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91 TCYEDQGISYRGTWSTAESGAECTNWNSSALAQKPYSGRRPDAIRLGLGNHNYCRNPDRD 150
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APPLICANT: Aranya Manosroi
APPLICANT: Diradej Manosroi
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Rolf-Guenther Werner
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: Mathods for Large Scale Production of Recombinant
TITLE OF INVENTION: Mathods for Large Scale Production of Recombinant
TITLE OF INVENTION: Mathods for Large Scale Production of Recombinant
TITLE OF INVENTION: Mathods for Large Scale Production of Recombinant
CURRENT FILING DATE: 2000-11.14
PRIOR FILING DATE: 2001-11.14
PRIOR FILING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 25
SEQ ID NO 19
LENGTH: 527
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40.8%; Score 226; DB 11; Length 527;
                                                                                                                               108 RRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                  61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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                                                                                                                                                                                                                                                                                           US-09-987-457-18
; Sequence 18, Application US/09987457
; Publication No. US20030013150A1
; GBNERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ), ORGANISM: Homo sapiens (tPA)
US-09-987-457-18
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US-09-987-455-19
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OPERATING SYSTEM: System 7.1
SOFTWARE: word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,624
FILING DATE: 10-Sep-2002
CLASSIFICATION: «Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 21-JAN 1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: SMICH PR. D., JULIE K.
REGISTRATION NUMBER: P-38,619
REPERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
TELEPAX: (610) 454-3808
INFORMATION FOR SEG ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111 RRRPWCYVQVGLKPLVQECMVHDCADGK 138
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MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-624-12
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US-09-880-503-6
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LENGTH: 403
TYPE: PRT
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US-10-193-656-8
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                                                              2 TCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
                                                                                                                                                                                                                                                                                         Sequence 7, Application US/09969271
; Sequence 7, Application US/09969271
; Patent No. US20020098179A1
; GENERAL INFORMATION:
; APPLICANT: Fizzer Inc. (All designated States except GB and EP (GB));
; APPLICANT: Fizzer Limited (GB and EP (GB) only);
; TITLE OF INVENTION: Pharmaceutical Combinations
; FILE REFERENCE: PCS10951APWE
; CURRENT APPLICATION NUMBER: US/09/969,271
; CURRENT FILING DATE: 2000-10-01
; PRIOR APPLICATION NUMBER: GB 0025473.0
; PRIOR FILING DATE: 2000-10-17
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGKHNYCRNPDNR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 40.8%; Score 226; DB 9; Length 562; 1 Similarity 47.7%; Pred. No. 9e-18; 41; Conservative 9; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; FEATURE:
; NAME/KBY: misc_feature
; OTHER INFORMATTON: Incyte ID No. US20020156263A1 1001470CD1
US-09-974-298-145
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ilarity 47.7%; Pred. No. 8.4e-18;
Conservative 9; Mismatches 36; Indels
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Patent No. US20020156263A1
GENERAL INPORMATION:
TITLE NEPREBLICANT: Chen, Huel-Mei
TITLE REPREBLICE PA-0037 P
CURRENT APPLICATION NUMBER: US/09/974,298
CURRENT FILING DATE: 2001-10-04
PRIOR FILING DATE: 2000-10-10
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 194
SOFTWARE: PERL PROGram
SEQ ID NO 145
                                                                                                                                                                          186 SKPWCYVFKAGKYSSEFCSTPACSEG 211
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ORGANISM: Homo sapiens
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    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
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Sequence 4, Application US/10443701

Sequence 4, Application US/10443701

Publication No. US20030199016A1

GENERAL IMPORMATION:

APPLICANT: Xu, Yuan

TITLE OF INVENTION: REVERSE-PHASE HPLC ASSAY FOR PLASMINOGEN ACTIVATORS

FILE REPERENCE: P178B1

CURRENT ELILING DATE: 2003-05-21

PRIOR PILING DATE: 2003-05-21

PRIOR PILING DATE: 2000-11-01

PRIOR FILING DATE: 1999-11-04

NUMBER OF SEQ ID NOS: 4

SEQ ID NO 4
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2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
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Publication No. US20030096733A1
GENERAL INFORMATION:
APPLICANT: NV. Tor
APPLICANT: HOLMDAHL, Rikard
APPLICANT: LI, Jinan
ITILE OF INVENTION:
CURRENT APPLICATION NUMBER: US/10/193,656
CURRENT FILING DATE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR PILING DATE: 2001-07-10
PRIOR PILING DATE: 2001-07-10
PRIOR PILING DATE: 2001-07-11
PRIOR FILING DATE: 2001-07-13
NUMBER OF SEQ ID NOS: 18
SEQ ID NO 8
LENGTH: 562
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Pred. No. 9e-18;
9; Mismatches 36;
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DATABASE ACCESSION NUMBER: GenEank / P00750
DATABASE ENTRY DATE: 1986-07-21
RELEVANT RESIDUES: (1)..(562)
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                                                                                                                                              186 SKPWCYVFKAGKYSSEFCSTPACSEG 211
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                                                                                              62 RRPWCYVQVGLKPLVQECMVHDCADG 87
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Best Local Similarity 47.7%;
Matches 41; Conservative 5
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US-10-443-701-4
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51, Appl
5520913
5244676
Seguence 38, Applatent No. 5185255
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Patent No. 524
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Sequence 63,
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                                                    Patent No.
Patent No.
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                                                                            5344773.2
US-08-560-098A-51
55244676-5
US-09-101-272G-98
US-08-811-949-51
US-08-811-949-51
US-08-811-949-63
US-08-101-272G-80
US-08-111-949-55
US-09-101-272G-96
US-09-101-272G-96
US-09-811-949-63
US-09-811-949-63
US-09-811-949-63
US-09-811-949-63
US-09-811-949-63
US-09-811-949-63
US-08-811-949-49
US-08-883-795A-38
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CITY: Boston
STATE: Massachusetts
CUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER IBM PS/2 Model 502 or 555X
ORPEZATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
FILING DATE: 07/02/93
CLASSIFICATION NUMBER: US/08/087,163
FILING DATE: 70702/93
CLASSIFICATION NUMBER: STREET FASSES, 07/02/93
REFERENCE/AGENT INFORMATION:
RAPLICATION NUMBER: 32,983
REFERENCE/DOCKET NUMBER: 04353/003001
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MUTANTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08087163
Patent No. 5472692
GENERAL INFORMATION:
APPLICANT: Liu, Jian-Ning
APPLICANT: Gurewich, Victor
TITLE OF INVENTION: PRO-UROKINASE MUNDRER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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à
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Sequence 1, Appli
Patent No. 518829
Sequence 3, Appli
Sequence 1, Appli
Patent No. 5219569
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Sequence 25, Appl
Sequence 39, Appl
Sequence 16, Appl
Sequence 2, Appli
Patent No. 5185259
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Sequence 18, Appl
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818.010 Million cell updates/sec
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6. /cgn2_6/ptodata1/iaa/PCTUS_COMB.pep:*
                           GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd
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US-08-123-798-18
US-09-101-2726-1
5188829-1
US-07-942-1
US-07-942-1
US-09-181-816-1
518829-1
US-09-181-816-1
5219-56-2
US-08-560-098A-48
US-08-560-098A-48
US-08-560-098A-44
US-08-560-098A-44
US-08-560-098A-44
US-08-560-098A-45
US-08-101-2726-73
US-08-11-25908-25
US-08-811-25908-25
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US-08-560-098A-50
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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100.0%; Pred. No. 2.1e-192;
tive 0; Mismatches 0;
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PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 07/847975
PILING DATE: 06-MAR.1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8909916.2
FILING DATE: 29-APR.1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB90/00650
FILING DATE: 26-APR.1990
PRIOR APPLICATION DATA:
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FILING DATE: 29-OCT-1991
ATTORNEY/AGENT INFORMATION:
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REGISTRATION NUMBER: 24864
REFERENCE/DOCKET NUMBER: 92H832
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   Best Local Similarity 100.
Natches 411; Conservative
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STATE: New Jersey
COUNTRY: USA
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                                         KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK
                                                              RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
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Patent No. 5759542
GENERAL INFORMATION:
APPLICANT: Victor Gurewich
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DELIVERY
TITLE OF INVENTION: OF DRUGS BY PLATELETS FOR THE TREATMENT OF
TITLE OF INVENTION: ARDIOVASCULAR AND OTHER DISEASES
NUMBER OF SEQUENCES: 18
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ZIP: 02110-2804
COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 502 or 55X
COMPUTER: WordPerfect (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/286,748B
FILING DATE: August 5, 1994
CLASSIFICATION NUMBER:
APPLICATION NUMBER:
APPLICATION NUMBER:
APPLICATION NUMBER:
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TELECOMMULICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 411
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REGISTRATION NUMBER:
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CITY: Boston
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US-08-286-748B-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/153,799
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ENSTDYLYPEQLKWTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
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5188829-1
; Patent No. 5188829
; APPLICANT: KOBAYASHI, YO-ICHI; OMORI, MUNEKI; YAMADA, CHIK
; TITLE OF INVENTION: RAPIDLY ACTING PROUROKINASE
; NUMBER OF SEQUENCES: 23
; CURRENT APPLICATION DATE: 18/07/340,007
; RELING DATE: 18-AUG-1988
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100.0%; Score 2301; DB 6;
Best Local Similarity 100.0%; Pred. No. 2.2e-192;
Matches 411; Conservative 0; Mismatches 0;
                     2.2e-192;
                                                Mismatches
                     Pred. No.
100.0%; Pr.
                                                411; Conservative
                     Best Local Similarity
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                                                                                                                                                                                                                                                                                                  Length 411;
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CTHER INFORMATION: Urokinase-type plasminogen activator (uPA)
US-09-101-272G-1
                                                                                                                                                                                                                                                                                                                                             Indels
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## Patent No. 6509445
# Patent No. 6509445
# Patent No. 6509445
## Patent No. 6509445
## Patent No. 6509445
## Patent No. 6509445
## Patent No. 650946
## Patent No. 650979
## Patent Patent No. 650979
## CURRENT APPLICATION NUMBER: US/09/101,272G
## CURRENT PATENT OF DATE: 1998-07-08
## PATENT PATENT NO. 809979
## PATENT NO. 809979

                                                                                                                                                                                                                                                                                             100.0%; Score 2301; DB 1;
100.0%; Pred. No. 2.1e-192;
artive 0; Mismatches 0;
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              TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 665 2400
TELEFAX: (908) 771 6159
TELEY: 219464
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 411 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                           Matches 411; Conservative
                                                                                                                                                                                           ; TOPOLOGY: linear; ; MOLECULE TYPE: protein US-08-153-799-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
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LOCATION: (21)..()
OTHER INFORMATION:
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Best Local Similarity
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US-09-101-272G-1
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61 KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                  260 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 319
                                                                                                                                                                                                                                                                      320 ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 379
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                                                                200 RGGSVTYVCGGSLMSPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
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Fatent No. 6277818
GENERAL INFORMATION:
APPLICANT: MAZAR, Andrew P.
APPLICANT: MAZAR, Terence R.
TITLE OF INVENTION: CYCLIC PEPTIDE LIGANDS THAT TARGET UROKINASE
TITLE OF INVENTION: CYCLIC PEPTIDE LIGANDS THAT TARGET UROKINASE
TITLE OF INVENTION: CYCLIC PEPTIDE LIGANDS THAT TARGET UROKINASE
TITLE OF INVENTION: 2020420000 SIDN 1-7
CURRENT APPLICATION NUMBER: US/09/181,816
CURRENT FILING DATE: 1998-10-29
NUMBER OF SEQ ID NOS: 7
SOFTWARE: PATENTIN VOY: 2.0
                                                                                                                                                                                                                                                                                                                                                                              380 VCSLQGRMTLIGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 430
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Pred. No. 1.5e-191;
0; Mismatches 1;
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Best Local Similarity 99.8%;
Matches 410; Conservative
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; ORGANISM: Homo sapiens
US-09-181-816-1
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US-09-181-816-1
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OTHER INFORMATION: /label= modified
OTHER INFORMATION: /note= "six amino acids deleted in mutant"
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VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
                              381 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
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99.8%; Pred. No. 4e-192;
live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: I FLODEY MISS.

COMPUTER: I FLODEY MISS.

COMPUTER: I MAP C Compatible

OPERATING SYSTEM: PC_DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURSTINCATION DATA:

PILING DATE: 19920908

CLASSIFICATION: 435

PRIOR APPLICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/631673

FILING DATE: 20-DEC-1990

ATTORNEY, AGENT INFORMATION:

NAME: Pabst, Patrea L.

REGISTRATION NUMBER: 31,284

REFERENCE/DOCKET NUMBER: 31,284
                                                                                                                                                                                                                                                              APPLICANT: Wei, Cha-Mer
TITLE OF INVENTION: Inhibitor-Resistant Urokinase
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                   E: Kilpatrick & Cody
1100 Peachtree Street Suite 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= peptide
/note= "WAP signal"
                                                                                                                                                                                Sequence 3, Application US/07942157A
Patent No. 5648253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 3:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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AMINO ACID
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Matches 410; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: Peptide
LOCATION: 1..19
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Georgia
: USA
                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Atlanta
                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                         US-07-942-157A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-07-942-157A-3
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Sequence 47, Application US/08560098A
Patent No. 5976841
GENERAL INFORMATION:
APPLICANT: WNENDY, Stephan
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEPFENS, Gard Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSE: Evenson, McKeown, Edwards & Lenahan STREET: 1200 G Street, N.W., Suite 700 CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                     99.0%; Score 2277; DB 2;
ilarity 99.3%; Pred. No. 2.6e-190;
Conservative 0; Mismatches 3;
                                                                                       NAME: EVANS, JOSEPh D.
REGISTRATION NUMBER: 26,269
REGISTRATION NUMBER: 146/42448
TELECOMMUNICATION:
TELEPHONE: (202) 628-8800
   FILING DATE: 17-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                   TELEPHONE: (202) 628-88C
TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                               411 amino acids
                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: protein US-08-560-098A-48
                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 408; Conserv
                                                                                                                                                                                                                                                                             STRANDEDNESS:
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US-08-560-098A-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRKIIGGEFTTIENQPWFAAIYRRH 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 379
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                                                                                                                                                                                                                                                                           Length 430;
                                                                                                                                                                                                                                                                                                            0; Indels
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 48, Application US/08560098A
Patent No. 5976841
GENERAL INFORMATION:
APPLICANT: WISHOL.
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
Patent No. 5219569
, APPLICANT: BLABER, MICHAEL;HEYNEKER, HERBERT L.;VEHAR,
                                                                                                                                                                                                                                                                          DB 6;
                          GORDON A.

TITLE OF INVENTION: PROTEASE RESISTANT UROKINASE
NUMBER OF SEQUENCES: 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/766,858
FILING DATE: 16-AUG-1985
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 725,468
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                        Score 2285.5; DB (
Pred. No. 4.9e-191; 
0; Mismatches 0;
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Suite 700
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                                                                                                                                                                                                                                                                        99.3%;
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Best Local Similarity 99.8
Matches 410; Conservative
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                                            SEQ ID NO:2:
; LENGTH: 430
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
US-08-560-098A-48
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                                                                                                                                                                                                                                                                                                                                                                       241 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 IHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
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                                                                                                     1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                              1 SNELHQVPSNCDCLNGGTCVSNKYPSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                    RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                     ..
Length 411;
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61 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTT 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYND 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 PQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQ 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAOPSRTIQTICLPSMYND 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287 POFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECOOPHYYGSEVTTKMLCAADPO 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEE 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 SKTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167 IENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47 SKTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/093,741
FILING DATE: 20-JUL-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATE: B P43 23 754.1
APPLICATION NUMBER: DE P43 23 754.1
APPLICATION NUMBER: DE P43 23 754.1
APPLICATION NUMBER: DE P43 23 754.1
FILING DATE: 15-JUL-1993
ATORNEY/AGENT INFORMATION:
NAME: EVANG, JOSEPh D.
REGISTRATION NUMBER: 26,269
REGISTRATION NUMBER: 148/41345
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87.9%; Score 2022; DB 1; I
100.0%; Pred. No. 3.5e-168;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STEFFENS, GERD J.
WNENDT, STEPHAN
SCHNEIDER, JOHANNES
HEINZEL-WIELAND, REGINA
                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Patent No. 5747291
GENERAL INFORMATION:
APPLICANT: STEFFENS, GERD J.
APPLICANT: SCHNEIDER, JOHANNES
ADDRESSEE: Evenson, McKeown,
STREET: 1200 G Street, N. W.
CITY: Mashington, D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (202)628-8844
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    365 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (202) 528-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.
Matches 365; Conservative
                                                                                            ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PWNSATVLQQTYHAHRSDALQLGLGRGHYYCRNPDNRRRPWCYVQVGLKPLVQECMVHDCA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PWNSATYLQQTYHAHRSDALQLGLGRGHNYCRNPDNRRRPWCYVQVGLKPLVQCCAVHDCA 153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQL 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTG 372
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |: | : | : | : | : | CVTGEGTPKPESHNNGDFBEIPEEY-----LQISKTCYEGNGHFYRGKASTDTMGRPCL 93
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Patent No. 5681721
GENERAL INFORMATION:
APPLICANT: STEFFENS, GERD J.
APPLICANT: SCHEIDER, JOHANNES
APPLICANT: SCHEIDER, JOHANNES
APPLICANT: SCHEIDER, JOHANNES
APPLICANT: SCHEIDER, JOHANNES
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: SAUNDERS, DERER, JOHANDERS, APPLICANT: IMPROVED FISHINOLYTIC CHARACTERISTICS AND THROMBIN TITLE OF INVENTION: IMPROVED FISHINOLYTIC CHARACTERISTICS AND THROMBIN UMBER OF SEQUENCES: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16; Indels
  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
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92.5%; Pred. No. 3.5e-168;
iive 8; Mismatches 16;
                                                                                       APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
RIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                     REFERENCE DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAK: (202) 628-8844
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                          432 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 92.5
Matches 369; Conservative
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US-08-093-741-83
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APPLICANT: SAUNDERS, DEREK J.

TITLE OF INVENTION: BIFUNCTIONAL UROKINASE VARIANTS WITH

TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN

TITLE OF INVENTION: INHIBITING EFFECT

CORRESPONDENCE: 83

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTT
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                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/720,012
FILING DATE: 27-SEP-1996
CLASSIFICATION: A35
PRIOR APPLICATION NAMER: US 08/093,741
PILING DATE: 20-JUL-1993
APPLICATION NUMBER: DE P43 23 754.1
FILING DATE: DE-JUL-1993
ATING DATE: 15-JUL-1993
ATING DATE: 15-JUL-1993
ATING DATE: 15-JUL-1993
ATING DATE: 15-JUL-1993
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100.0%; Pred. No. 3.5e-168;
Live 0; Mismatches 0;
                                                                                                                               Lenahan
                                                                                                                             Edwards & Suite 700
                                                                                                                    ADDRESSEE: Evenson, McKeown, STREET: 1200 G Street, N. W. CITY: Washington, D.C. COUNTRY: U.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: EVANS, JOSEPH D. REGISTRATION NUMBER: 26,269
REGISTRATION NUMBER: 146
REFERENCE/DOCKET NUMBER: 146
TELECOMMUNICATION INFORMATION: 7ELEPHONE: (202)628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (202)628-8844
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 100.
Matches 365; Conservative
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RESULT 13

47 SKTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPD 106 107 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTT 166 167 IENOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNS 226 241 346 406 361 61 2 SKTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPD 62 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTT 227 NIQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYND 182 NTQGEMKREVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYND 242 POFGTSCELTGFGKENSTDYLYPEQLKMTVVKLISHRECOOPHYYGSEVTTKMLCAADPO 302 WKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVTRVSHFLPWIRSHTKEE 122 IENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNS POPGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPO 347 WKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEE Gaps 0 Indels COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA: 100.0%; Pred. No. 3.8e-168; :ive 0; Mismatches 0: ADDRESSEE: Evenson, McKeown, Edwards & STREET: 1200 G Street, N.W., Suite 700 CITY: Washington APPLICATION NUMBER: US/08/560,098A FILING DATE: 17-NOV-1995 PRICATION DATA: APPLICATION NUMBER: P 44 40 892.7 FILING DATE: 17-NOV-1994 ATTORNEYAGENT INFORMATION: NAME: EVANS, JOSEPH D. REGISTRATION NUMBER: 26,269 REFERENCE/DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 628-8800
TELEPAX: (202) 628-8844
INPORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS: Query Match
Best Local Similarity 100.
Matches 365; Conservative TOPOLOGY: linear MOLECULE TYPE: protein 407 NGLAL 411 DC USA STRANDEDNESS 20005 STATE: DC COUNTRY: US-08-560-098A-44 287 à 쉽 ઠ g ò g g 셤 à ò à

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107 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTT 166
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                             2 SKTCYBGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD
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                                                                                                                                                                                                                                                                                                                  APPLICANT: WNENDT, Stephan
APPLICANT: STEPPENS, Gerd Josef
APPLICANT: JANOCHA, Elke
APPLICANT: JANOCHA, Elke
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: HEINZEL-WIELAND, Chimetic Proteins having Fibrinolytic
NUMBER OF SEQUENCES.
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APPLICATION NUMBER: US/08/967,024C
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87.9%; Score 2022; DB 3; I
Best Local Similarity 100.0%; Pred. No. 3.8e-168;
Matches 365; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 42 665.8
FILING DATE: 30-NOV-1994
ATTORNEY/AGENI INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMBUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                             Sequence 25, Application US/08967024C Patent No. 6133011 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEMERATION: (202) 628-8800
TELEFAX: (202) 628-8844
INPORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
LENGTH: 393 amiliani
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TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                          362 NGLAL 366
                                                                                                NGLAL 411
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87.9%; Score 2022; DB 3; Length 393;
Best Local Similarity 100.0%; Pred. No. 3.8e-168;
Matches 365; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                    APPLICANT: WNENDT, Stephan
APPLICANT: STEPPENS, Gerd Josef
APPLICANT: JANOCHA, Blke
APPLICANT: JANOCHA, Blke
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: SEQUENCES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO) CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,024C
                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N.W., Suite 700
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 42 665.8
FILING DATE: 30-NOV-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: DC
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                              Sequence 24, Application US/08967024C
Patent No. 6133011
GENERAL INFORMATION:
APPLICANT: WNENDT, Stephan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: EVANS, JOSEPh D.
REGISTRATION UNDRER: 26,269
REFERENCE/DOCKET NUMBER: 148/
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEPHONE: (202) 628-8844
INFORMATION FOR SEQ ID NO: 24:
SEQUENCE CHARACTERISTICS:
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                       362 NGLAL 366
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TOPOLOGY: li
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177 SMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLC 236
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                                            282 SMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLC
                                                                                                                                  342 AADPOWKTDSCOGDSGGPLVCSLOGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRS
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SOFTWARE:
PATENTING SISIEM:
PUBOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
FRIOR APPLICATION DATA:
FILING DATE: 17-NOV-1994
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: WNENDT, Stephan
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEE: Evenson, McKeown, Edwards & Lenahan: 1200 G Street, N.W., Suite 700 Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.5%; Score 1507.5; DB 2 90.6%; Pred. No. 1.9e-123; ive 3; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                               Sequence 46, Application US/08560098A Patent No. 5976841
GENERAL INFORMATION:
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TELEFAX.
INFORMATION FOR SEQ ID NO: 4 SEQUENCE CHARACTERISTICS: LENGTH: 331 amino acids
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Matches 281; Conservative
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ZIP: 20005
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                POFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQ 346
                                                 242 PQFGTSCEITGFGKENSTDYLYPEQLKWTVVKLISHRECQQPHYYGSEVTTKWLCAADPQ 301
                                                                                                      347 WKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEE 406
                                                                                                                                                 302 WKTDSCOGDSGGPLVCSLOGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEE 361
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Pred. No. 1.7e-123;
3; Mismatches 9; Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: WHENDT, Stephan
APPLICANT: WINELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
APPLICANT: STEFFENS, Gerd Abosef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Evenson, McKeown, Edwards & Lenahan
1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
RIOR APPLICATION DATE:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 629-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPPRATING SYSTEM: PC-DOS/MS_DOS
                                                                                                                                                                                                                                                                                                                                                   Sequence 45, Application US/08560098A Patent No. 5976841
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90.6%;
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INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                306 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: protein
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                                                                                                                                                                                                                                                                                                      RESULT 16
US-08-560-098A-45
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                                                                                                                                                                                             407
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Best Local
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us-09-880-503-3.rai

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61 LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI 120
                                                                                                                                                                                          CLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK 338
                                                                                                                                                                                                                     121 CLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK 180
                                                                                                                                                                                                                                                                                                                               181 MLCAADPQWKTDSCOGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPW 240
                                                                                                                                                                                                                                                                                    339 MLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPW 398
       159 IIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY
                                                1 IIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY
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                                                                                                   LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 49, Application US/08560098A
Patent No. 5976841
GENERAL INFORMATION:
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEPFENS, Gerd Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N.W., Suite 700
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59.7%; Score 1374; DB 2;
99.2%; Pred. No. 5.8e-112;
iive 0; Mismatches 2;
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 254 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                             399 IRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                      241 İRSHİKEENGLAL 253
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Matches 252; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC
OPERATING SYSTEM:
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APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.
APPLICANT: GRANADOS, EDWARD N.
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STEWART, KENT D.
APPLICANT: STEWART, KENT D.
APPLICANT: STEWARD STEVEN D.
TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
TITLE OF INVENTION: OF THE PROSTATE
TITLE OF INVENTION: OF THE PROSTATE
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                               237 AADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRS 296
SRINSNIQGEMKFEVENLILHKOYSADILAHHNDIALLKIRSKEGRCAQPSRIIQTICLP 176
                                                                        SMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLC 341
                                                                                                                    177 SMYNDPQPGTSCEITGPGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLC 236
                                                                                                                                                               342 AADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRS 401
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENY APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 6183.US.01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 73, Application US/08944483; Patent No. 6232456; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEE: Abbott Laboratories
: 100 Abbott Park Road
Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No. 6232456e
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TYPE: amino acid
STRANDEDNESS: single
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CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                    297 HTKEENGLAL 306
                                                                                                                                                                                                                                                           402 HTKEENGLAL 411
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ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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MOLECULE TYPE:
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61 KASTDIMGRPCLPMNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38.4%; Score 883; DB 3; Length 157; 96.8%; Pred. No. 1.8e-69; tive 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, ADDRESSE: P.C. STREET: 1752. JEFFERSON DAVIS HIGHWAY, SUITE 400 CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 PLVQECMVHDCADGKKPSSPPEELKFQCGGKTLRPRF 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 PLVQECMVHDCADGKKPSSPPEELKFQCGQKYLRPRF 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: NIWA, MINEO
APPLICANT: SAITO, YOSHIWASA
APPLICANT: SASAIT, HITOSHI
APPLICANT: HAYASHI, MASAKO
APPLICANT: NOTANI, JOUJI
APPLICANT: KOBAYASHI, MASAKAZU
APPLICANT: KOBAYASHI, MASAKAZU
APPLICANT: KOBAYASHI, MASAKAZU
TITLE OF INVENTION: TISSUE PLASMINOGEN ACTIVATOR
NUMBER OF SEQUENCES: 67
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:

FILLING DATE: 05-MAR-1997
           COMPUTER: FLANDED GISK
COMPUTER: FLANDEY disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/142,590B
FILING DATE: 25-OCT-1993
ATTORNEY AGENT INFORMATION:
NAME: MYGER, Paul L.
REGISTRATION NUMBER: 35,965
REFERENCE/COCKET NUMBER: 35,965
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 39, Application US/08811949; Patent No. 5840533; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : 157 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 152; Conservative
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; FRAGMENT TYPE: internal
US-08-142-5908-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
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US-08-142-590B-25
Sequence 25, Application US/08142590B
Sequence 25, Application US/08142590B
Sequence 25, Application US/08142590B
Sequence 25, Application US/08142590B
Sequence 25, Application US/08142590B
Sequence 25, Application US/08142590B
SEQUENCE OF INVENTION: Tashihiko; TAKAHASHI, Tadahito; HORII, Izumi; and GOETINCK, TITLE OF INVENTION: URCKINASE PLASMINOGEN ACTIVATOR FRAGMENTS
NUMBER OF SEQUENCE: 25
CORRESPONDENCE ADDRESS: AMAIVE & COCKFIELD, LLP
STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 PLVQECMVHDCADGKKPSSPPBELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
                             218 YLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQT 277
                                                                      61 YLGRSKLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQT 120
                                                                                                                                         278 ICLPSMYNDPQFGTSCEITGFGKENSTDYLYPBQLKMTVVKLISHRECQQPHYYGSEVTT 337
                                                                                                                                                                               121 ICLPSMYNDPQFGTSCEITGFGKENSTDYLYPBQLKMTVVKLISHRECQQPHYYGSEVTT 180
                                                                                                                                                                                                                                                  338 KMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLP 397
                                                                                                                                                                                                                                                                                181 KMLCAADPQWKTDSCQGDSGGPLVCSLQCRMTLTGIVSWGRGCALKDKFGVYTRVSHFLP 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 SNEIHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
FILE REFERENCE: 05099
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT APPLICATION NUMBER: US/09/1096
PRIOR FILING DATE: 1998-07-08
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107
SEQ ID NO 3: 107
LENGTH: 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; NAME/KEY: misc feature
; OTHER INFORMATION: AIF domain of uPA
US-09-101-272G-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 73, Application US/09101272G ; Patent No. 6509445
                                                                                                                                                                                                                                                                                                                                                                                                                      241 WIRSHIKEENGLVL 254
                                                                                                                                                                                                                                                                                                                                                                    WIRSHTKEENGLAL 411
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STATE: Massachusetts
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 02109
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221 AQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGL 280
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 ELHQVP-SNCD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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GENERAL INFORMATION:
APPLICANT: Genentech, Inc.
TITLE OF INVENTION: Tissue Plasminogen Activator Having Fibrin
TITLE OF INVENTION: Specific Properties
CORRESPONDENCES:
CORRESPONDENCE ADDRESS:
ADDRESSER: ADDRESS:
ADDRESSER: ADDRESS:
CITY: South San Francisco
STRIE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                   37.6%; Score 864.5; DB 1; Length 527; 38.1%; Pred. No. 3.4e-67; tive 56; Mismatches 157; Indels 89.
Diskette, 3.50 inch, 1.0 Mb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -------SPPEELK------
                                                                                                     UMBER: US/07/609,510B
19901106
                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/60
FILING BATE: 19901106
CLASSIFICATION: 435
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 527 amino acids
TYPE: AMINO ACID
                        COMPUTER: Macintosh
OPERATING SYSTEM: Macintosh
SOFTWARE: Microsoft Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LKPLVQECMVHDCADG-----
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Matches 186; Conservative
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                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: protein
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519 DWIRDNMR 526
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    MEDIUM TYPE:
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US-07-609-510B-16
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Patent No. 5326700
GENERAL INFORMATION:
APPLICANT: Berg et al.
TITLE OF INVENTION: Method for Altering Post-Translational Processing of Tissue NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
                                                                                                                                                                                                                                                                                                                                                                                                11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 343 AD-----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
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                                                                                                                                                                                                                                                                                                                                                                                                89;
                                                                                                                                                                                                                                                                                                                                                        Length 527;
                                                                                                                                                                                                                                                                                                                                                 37.9%; Score 871.5; DB 2; Length : 38.3%; Pred. No. 8.2e-68; ive 56; Mismatches 156; Indels
    CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: OBLON, NORMAN F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 18-966-0
TELECOMMUNICATION INFORMATION:
TELECHONE: 703-413-3000
TELEFRAX: 703-413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEE: Bli Lilly and Compa
: Lilly Corporate Center
Indianapolis
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                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                       LENGTH: 527 amino acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-811-949-39
                                                                                                                                                                                                                                                                                                                                                                          al Similarity 38.3%
187; Conservative
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COMPUTER READABLE FORM:
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519 DWIRDNMR 526
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TITLE OF INVENTION: TRUNCATED HUMAN TISSUE PLASMINOGEN
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Matches 186; Conserv
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US-08-811-949-43
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                                                                                                                                                                                                                                                                                                                                                                 DB 5; Length 527;
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; APPLICANT: GOEDDEL, DAVID V.;KOHR, WILLIAM J.;PENNICA, DIANE;
;VEHAR, GORDON A.
                                                                                                                                                                                                                                                                                                                                                              ; Score 864.5; DB 5; Length; Pred. No. 3.4e-67; 56; Mismatches 157; Indels
         MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --------SPPEELK-----
                                              SOFTWARE: patin (Genericch)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US91/01025A
FILING DATE: 19910214
                                                                                                                PRIOR APPLICATION DATA:
APPLICATION UNMBER: 07/486,657
FILING DATE: 1 March 1990
ATTORNEY AGENT INFORMATION:
NAME: Hasak, Janet E.
REGISTRATION NUMBER: 28,616
REFERENCE/DOCKET NUMBER: 454P2
TELECOMMUNICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LKPLVQECMVHDCADG-----
                                                                                                                                                                                                                                                                                                                                                               37.6%;
38.1%;
                                                                                                                                                                                                                                        TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                         : 415/266-1896
415/952-9881
                                                                                                                                                                                                                                                                                             : 527 amino acids
AMINO ACID
                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 38.19
Matches 186; Conservative
COMPUTER READABLE FORM:
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DWIRDNMR 526
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                                                                                       FILING DATE: 19
CLASSIFICATION:
                                                                                                                                                                                                                             TELEPHONE:
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                                                                                                                                                                                                                                                                                                                        TOPOLOGY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 GKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPS 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      221 AQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGL 280
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              343 AD-----PQWKT-DSCQGDSGGPLVCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   459 GDTRSGGPQANLHDACQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37.6%; Score 864.5; DB 6;
llarity 38.1%; Pred. No. 3.4e-67;
Conservative 56; Mismatches 157;
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APPLICANT: NIWA, MINEO
APPLICANT: SAITO, YOSHIMASA
APPLICANT: SASAKI, HITOSHI
APPLICANT: HAYASHI, MASAKO
APPLICANT: NOTANI, JOHJI
APPLICANT: KOBANI, JOHJI
APPLICANT: KOBANISHI, MASAKAU
TITILE OF INVENTION: TISSUE PLASMINOGEN ACTIVATOR
NUMBER OF SEQUENCES: 67
ACTIVATOR

NUMBER OF SEQUENCES: 15

CURRENT APPLICATION DATA:

ADPLICATION NUMBER: US/07/489,855

FILING DATE: 02-MAR-1990

PRIOR APPLICATION DATE: 2,694

FILING DATE: 09-FEB-1987

APPLICATION NUMBER: 12,694

FILING DATE: 07-APR-1983

APPLICATION NUMBER: 389,003

FILING DATE: 14-JUL-1982

FILING DATE: 14-JUL-1982

APPLICATION NUMBER: 374,860

FILING DATE: 05-MAY-1982
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; Patent No. 5840533
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CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
STREET: 1755 S. JEFFERSON DAVIS HIGHWAY, SUITE 400 CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/811,949
FILING DATE: 05-MAR-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: OBLOW, NORMAN F.
REFERENCE/DOCKET NUMBER: 18-966-0
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.6%; Score 864.5; DB 2;
38.1%; Pred. No. 3.6e-67;
tive 56; Mismatches 157;
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                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119 LKPLVQECMVHDCADG----
                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 703-413-2220
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 703-413-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.6%;
Best Local Similarity 38.1%;
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 562 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                    ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                       COUNTRY:
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59 RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | : | :| :| | | 256 AQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGL 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376 YRVVPGEBEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSVVRTVCLPP 433
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119 LKPLVQECMVHDCADG-----KKPS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: Eloppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPAGE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY-AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                    APPLICANT: WNENDT, Stephan
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Cosquiation-inhibiting Properties
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                           E: Evenson, McKeown, Edwards & Lenahan
1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 37.6%; Score 864.5; DB 2; Best Local Similarity 38.1%; Pred. No. 3.6e-67; Matches 186; Conservative 56; Mismatches 157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SPPEELK-----
                Sequence 50, Application US/08560098A Patent No. 5976841
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO: 50:
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TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
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                                                                                                                                                                                                                                                                                                                       STREET: 1200 G St
CITY: Washington
STATE: DC
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TELEFAX: (
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JS-08-560-098A-50
                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
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11;
                                                                                                            282
                                                                                                                                   376 YRVVPGEBEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSVVRTVCLPP 433
   256 AQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGL 315
                                                                                                                                                                                   283 MYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTXMLCA 342
                                                                                                                                                                                                              434 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCA 493
                                                                                                                                                                                                                                                          343 AD----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
                                                                                                                                                                                                                                                                               494 GDTRSGGPQANLHDACQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYL 553
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                                                           RINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPS
                                      FTTIENQPWFAAIYRRH-RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 BLHQVP-SNCD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Parent No. 5185259
; APPLICANT: GOEDDEL, DAVID V.;KOHR, WILLIAM J.;PENNICA, DIANE;
;VEHAR, GORDON A.
TITLE OF INVENTION: TRUNCATED HUMAN TISSUE PLASMINOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37.6%; Score 864.5; DB 6;
38.1%; Pred. No. 3.6e-67;
tive 56; Mismatches 157;
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UNMBER OF SEQUENCES: 15

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/489,855

FILING DATE: 02-MAR-1990

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 12,694

FILING DATE: 09-FEB-1987
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 483,052
FILING DATE: 07-APR-1983
APPLICATION NUMBER: 398,003
FILING DATE: 14-JUL-1982
APPLICATION NUMBER: 374,860
FILING DATE: 05-MAY-1982
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Best Local Similarity 38.1
Matches 186; Conservative
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5185259-3
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283 MYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCA 342
                      434 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCA 493
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
                                                                      343 AD----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77 QCHSVPVKSČSEPRČFNGGTČQQALÝFSDF-VČQČPEGFAGKCČEÍDTRATČÝEDQGISÝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                 DNA Molecules and Expression
Tissue Plasminogen Activator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 562;
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CURRENT APPLICATION DATA:
FAPILCATION NUMBER: US/08/883,795A
FILING DATE: A.7JUN-1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37.6%; Score 864.5; DB 2;
38.1%; Pred. No. 3.6e-67;
live 56; Mismatches 157;
                                                                                                                                                                                                                                                                Sequence 38, Application US/08883795A
Patent No. 5985607
GENERAL INFORMATION:
APPLICANT: Delcuve, Genevieve
APPLICANT: Awang, Gregor
TITLE OF INVENTION: Recombinant DNA INTILE OF INVENTION: Vectors for Tiss)
NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 7841-062
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 364-7311
TELEFAX: (416) 361-1398
INFORMATION FOR SEQ ID NO: 38:
SEQUENCE CHARACTERISTICS:
LENGTH: 562 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Gravelle, Micheline
REGISTRATION NUMBER: 40,261
                                                                                                                                                                                                                                                                                                                                                                                                                                                       40 King Street West
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----SPPEELK-
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MOLECULE TYPE: protein (tPA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
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Best Local Similarity 38.1
Matches 186; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                             397 PWIRSHTK 404
                                                                                                                                                                    ||| : :
554 DWIRDNMR 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC OPERATING SYSTEM:
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STRANDEDNESS: siz
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ZIP: MSH 3Y2
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US-08-883-795A-38
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376 YRVVPGEEEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSVVRTVCLPP 433
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                                                                                                                  434 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLINRTVTDNMLCA
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| GKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPS
                                                                    283 MYNDPQFGTSCELTGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELHQVP-SNCD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: FOSTER, DONALD C.; MULVIHILL, ELLEEN R.; O'HARA, PATRICK J.; PINGEL, KURT; YOSHITAKE, SHINJI TITLE OF INVENTION: THROMBIN-ACTIVATED TISSUE PLASMINOGEN
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/53,412
FILING DATE: 22-MAY-1987
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W W	Thrombolytic enzyme.		agent;	; plasminogen	minc	activator	activity; fibrin affinity;	
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Urokinase precursor; fibrinolysis; thrombolytic; cerebral thrombosis; myocardial infarction;
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                                                                                                                                                                                                                                                                                                                                                                                Urokinase precursor-lipid composite - used as thrombolytic agent, having prolonged half-life in the blood, enhanced bio:availability and improved activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      By forming a precursor-lipid composite, the half-life of this thrombolytic agent in the blood may be increaced, exhibiting improved activity without abnormal acceleration of fibrinolytic activity. Compound is useful as a thrombolytic agent in treatment of cerebral thrombosis, myocardial infarction etc.
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                                                                                                                                                                                                                                                                                                                                           WPI; 1990-233117/31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411 AA;
                                                              Homo sapiens
                                                                                                                                                                         25-JAN-1990;
                                                                                                                                                                                                              17-MAY-1989;
                                                                                                                                                                                                                                27-JAN-1989;
                                                                                                                                    01-AUG-1990
                                                                                                 EP380334-A.
                                                                                                                                                                                                                                                                                                        Matsuda H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 SNELHOVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 RGGSVIYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTOGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                                                                                                                                                                                                                                                                                                                       Urokinase zymogen is cleaved into the two-chain form composed of characteristic urokinase H (molecular wie, 50,000) and L (molecular wie, 20,000) and L (molecular wie, 20,000) chains when treated with catalytic amounts of plasmin. The patentors claim a new urokinase zymogen which has mol. wt. ca. 50,000, a single chain molecular structure, and selective affinity for fibrin. It is a thrombolytic agent which manifests its plasminogen activator activity on cleavage by proteolytic enzymes (e.g. plasmin) and has higher affinity for fibrin than known forms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                        Zymogen AAP50871 is the inactive precursor form of human urokinase.
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                                                                                                                                                                                                                                              New urokinase zymogen - useful as thrombolytic agent
                                                                                                                                                                         Suyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 2301; DB 6;
100.0%; Pred. No. 5.4e-178;
iive 0; Mismatches 0;
                                                                                                                                                                     Nishhida
                                                                                                                                                                                                                                                                                   Disclosure, Page 12; 30pp; English.
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                                                                                               83JP-0170354
                                        84EP-0306117
                                                                              83JP-0195051
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                                                                                                                                                                       Mori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.
Matches 411; Conservative
                                                                                                                                (GREC ) GREEN CROSS CORP.
                                                                                                                                                                       Arimura H,
                                                                                                                                                                                                          WPI; 1985-106530/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
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                                        07-SEP-1984;
                                                                            17-OCT-1983;
                                                                                               13-SEP-1983;
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                                                                                                                                                                       Kasai
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-terminal; pro-uPA; urokinase plasminogen activator; receptor; uPAR; anti-cancer, atti-medsatatic; anti-proliferative; anti-atherosclerotic; anti-thrombotic; anti-angiogenic; anti-inflammatory; anti-arthritic; anti-fibrotic; apoptotic; vasotropic; anti-diabetic; ophthalmological;
  RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                     LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                                                                         LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                                                                                                                                             ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
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                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                      361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY92836 standard; Protein; 411
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
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                                                                                                                              Pro-urokinase; thrombolysis; fibrin clot lysis.
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                                                                                                                                                                                                                                                                                           "flexible loop"
                                                                                                                                                                                                                                   location/Qualifiers
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invasion and proliferation of cells, or angiogenesis, or to induce apoptosis. Particularly they are used, in human or veterinary medicine, to tread diseases characterized by these processes, e.g. solid tumors, leukaemia or lymphoma (or their metastases); benigh hyperplasis; atherosclerosis; restenosis; ischaemia; deep vein thrombosis; neovascular glaucoma; diabetic retinopathy; arthritis; fibrosis; bone fracture etc., most particularly growth, invasion and metastasis of tumors. When cyclic peptides can be used for diagnostic detection of upAR american immediate they are used to isolate uPAR or cells that express them. The cyclic peptides can etlls, tissues etc., in vivo or in vitro, and when immobilized they are used to isolate uPAR or cells that express them. The cyclic peptides are stable, soluble in water, bind strongly to attachment of therapeutic or diagnostic agents without significantly affecting their binding. Since they target uPAR, they should have grelatively low systemic toxicity and only low doses are required.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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100.0%; Pred. No. 5.4e-178;
ive 0; Mismatches 0;
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The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microrangiopathies, surgically induced thrombotic disorders, angiogenic disorders, upulmonary fibrosis, asthma, tumour cell invasion, tumour cell angiogenesis, tumour cell metastasis, glancoma, disorder, unchinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distress syndrome, primary pulmonary by hypertension, microvascular thrombotic occlusion, and a disorder associated with chronic intrapulmonary fibrin formation. The present sequence is human urokinasetype plasminogen activator (uPA) protein.
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                                                                                                                                                                                                                                                                        treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator -
                                                                                                                                                                                                                                                        Composition for modulating muscle cell and tissue contractility for
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                                                                                                                                                                                                                                                                                                                                Claim 9; Fig 1C; 117pp; English
                                    13-JUN-2001; 2001WO-US18976.
                                                                           20-JUN-2000; 2000US-212874P.
                                                                                                                (UYPE-) UNIV PENNSYLVANIA.
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Best Local Similarity 100.
Matches 411; Conservative
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AAPS0114 ID AAPS RESULT

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AAP50114 standard; Protein; 431 AA

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261 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 320
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                                            21 SNELHQVPSONCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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100.0%; Pred. No. 5:7e-178;
Live 0; Mismatches 0;
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SAGAMI CHEM RES CENTRE.
CENTRAL GLASS CO LTD.
NIPPON SODA CO.
TOYO SODA MFG CO LTD.
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                                                                                                                                                                                                                                                                                                              .coli, high molecular urokinase
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                                                               Sequence encoded by the signal sequence and noncoding region of
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Pred. No. 5.7e-178;
; Mismatches 0;
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animal cells transformed by DNA prepd. from m RNA
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                                                                                                         Enzyme, thrombosis therapy, embolic disease, single-chain pro-urokinase.
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/label= signal peptide
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                                                                                pro-UK structural gene (Sequence II)
                                                                                                                                                                               location/Qualifiers
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tive 0; 1
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/label= A chain
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/label= B chain
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84JP-0037119
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27-FEB-1984;
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AAP80430 standard; protein; 431 AA.
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14-SEP-1990
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04-DEC-1987;
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261 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                 RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                RGGSVIYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRINSNIQGEMKFEVENLI
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                                                                                                                                                                       381 VCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                                                                                                          VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
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/label= prourokinase
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21..431
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(NIPS ) NIPPON SODA CO.
(CENG ) CENTRAL GLASS CO LID.
(TOXJ ) TOYO SODA MFG CO LID.
(NISC ) NISSAN CHEM IND LID.
(NISC ) NISSAN CHEMICAL INDS KK.
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87JP-0018626.
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                                                                                                                                                                                                                                                                                                                                         enzyme; protease
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                                                                                                                                                                                                                                                                                                                                                                                                                                     141 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
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AAP70257). The C-terminal half of the hybrid polypeptide may contain an AA sequence from 150th glutamine to C-terminal 411th leucine of prourokinase (see AAP70258). (Updated on 25-MAR-2003 to correct PA field.)
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                                                                                                                                                Query Match
100.0%; Score 2301; DB 8;
Best Local Similarity 100.0%; Pred. No. 5.7e-178;
Matches 411; Conservative 0; Mismatches 0;
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(pro-UK); plasminogen activator; pUK33;

(first entry)

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/label=signal peptide /label=pro-urokinase

Location/Qualifiers

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Glycosylated single-chain pro-urokinase prodn -
by cultivating DHFR gene-deficient CHO-K1 cells transformed
with a plasmid contg cDNA, SV40 promoter and DHFR gene.
                                                                                     Pro-urokinase with signal seguence.
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                                                                                                               pro-urokinase
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                                                                                                                                                           The patent is for the prodn. of human single chain urokinase-type plasminogen activator (UTPA). Mutants of scu-PA are especially those which render the protein protease resistant. Such scu-PA mutants are covalently modified at sites of proteolysis by proteases occuring in blood such as thrombin or plasmin, so that thay are no longer susceptable to protease hydrolysis at these locations. The target sites include Lys135 to Lys136 (cleavage at this site generates the so-called low modecular weight form of scu-PA or LUK), Arg156 to Phe157 (susceptible to thrombin attack) and Lys158 to Ile159 (cleavage at this site penerates tuc-PA). Suitable scu-PA mutants have site specific substitutions, insertions or deletions of residues at one or more of these target sites. Especially preferred are those mutants in which one amino acid residue or both amino acid residues is replaced by another amino acid residues or comino acid residues is replaced by another amino acid residues is replaced by another amino acid residues or comino acid residues are resistant to proteolytic attack. The UTPA proteins exhibit the biological activity of natural human UTPA without any refolding procedure being necessary. They can be used as for known and the prevention or treatment of thrombosis or other
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCELTGFGK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                               Prodn. of human single chain urokinase type plasminogen activator by culturing yeast strain transformed with hybrid vector contg. yeast expression control sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        411
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                                                                                                                                                                                                                                                                                                                                                                                                                                    conditions where it is desired to produce local fibrinolytic or
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0
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100.0%; Pred. No. 5.7e-178;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteolytic activity. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                        Example 1; Fig 2; 48pp; English
                Burgi R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 411; Conservative
              Meyhack B, Heim J,
                                         WPI; 1988-301440/43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                       N-PSDB; AAN80981
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Suyama

Okabayashi K, Nagai M, Arimura H,

87EP-0115600.

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                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
The Arg at position 2 is encoded by TGA(sic). Possible error in the specification. Should read CGA?
                                                The pro-UK gene was derived from plasmid pUK33. The cDNA was synthesised using urokinase mRNA isolated from a human kidney cell line. Pro-UK was cloned into a SV40 promoter-contg. plasmid 'downstream of the promoter. This plasmid was then ligated to a DHFRgene contg. plasmid so that pro-UK and DHFR are inserted in opposite directions. The recombinant plasmid was used to transform CHO-Kl cell derived DHFR gene-deficient host cells to produce glycosylated single-chain pro-UK. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                     Length 431;
                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 2301; DB 9;
100.0%; Pred. No. 5.7e-178;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 411; Conservative
                                                                                                                                                                                                                                                                                                             431 AA;
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                                                                                                                                                                                                                                                                                                             Sequence
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AAP81204 standard; protein; 431 AA

RESULT 10 AAP81204 ID AAP8 ω

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06-OCT-1989;
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12-SEP-1990
                  Best Local Sim
Matches 411;
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                 ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 360
                            ENSTDYLYPEQLKATVVKLISHRECQQPHYYGSEVTTKALCAADPQWKTDSCQGDSGGPL 380
LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 320
                                                                                                                                                                                                                                                                                   note="May be replaced by a non-basic AA in new deriv."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A human prourokinase (PU) deriv. is new which is based upon residues 2-155 of natural human prourokinase. The new deriv. is produced by E. coli J103/pWT99/RPK in culture. It is a fast-acting drug for the treatment and prevention of thrombosis. (Updated on 25-WAR-2003 to correct PA field.) (Updated on 25-WAR-2003 to correct PI field.)
                                                     411
                                                             VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antithrombotic fast-acting pro-urokinase deriv. - produced by culture of E. coli transformant contg. new plasmid of PMOTPQ family.
                                                   VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
                                                                                                                                                                                                                                                                                                                      'note="Pro, Gly, Ala or Val in new deriv."
                                                                                                                                                                                                                                                                                                     /note="Undefined residue in new deriv."
                                                                                                                                                                                                                                                                  'note="Incorporated into new deriv."
                                                                                                                                                                                                                                                                                                                                       /note="Lys or Arg in new deriv."
                                                                                                                                                                                            Human prourokinase; antithrombotic; derivative.
                                                                                                                                                                                                                                                  'note="Optional in new deriv."
                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                AAP92119 standard; protein; 431 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure, Fig 1; 75pp, Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                            (SAGA ) SAGAMI CHEM RES CENTRE.
(CENG ) CENTRAL GLASS CO LTD.
(HODO) HODOGAYA CHEM KK.
(XIPS ) NIPPON SODA CO.
(NISC ) NISSAN CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yamada
                                                                                                                                                                                                                                                                                                                                                                                                             87JP-0204149.
                                                                                                                                                                                                                                                                                                                                                                                           88WO-JP00815.
                                                                                                                                                                           Natural human prourokinase.
                                                                                                                                                  (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Omori M,
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N-PSDB; AAN91075.
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                                                                                                                                                                                                                                                                                                              Misc-difference 157
                                                                                                                                                                                                                                                                           Misc-difference 135
                                                                                                                                                                                                                                                                                                                              Misc-difference 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431 AA;
                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                        Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                           18-AUG-1988;
                                                                                                                                                                                                                                                                                                                                                                                                             19-AUG-1987;
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29-JUN-1990
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261
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                                                                                                                                                                                                                                                                                         141 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
                                                                                                                                 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFK1 IGGEFTT1ENQPWFAAIYRRH
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                                                                                      SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                             Gaps
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    Length 431;
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                                             Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human pro-urokinase from the cDNA of clone pcUK176
Score 2301; DB 10;
Pred. No. 5.7e-178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Non-glycosylated pro-urokinase prodn. - using E
promoter Ptrp and Shine-Dalgarno sequence MS-2.
                                           0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page ?; ?pp; English.
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100.0%;
ilarity 100.0%;
Conservative 0
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                      Similarity
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                                                                                                       SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
                                                                                                                                                                                               PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
                                                                                                                                                                                                                                           RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENL1
                                                                                                                                                                                                                                                                                     ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
                                                                                        SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                       LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                                                                                                                                                                                                                                                                                                    ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
                                                                                                                                                                                                                            RGGSVTYVCGGSLISPCWISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prodn. of recombinant protein, esp. human pro:urokinase - from milk of transgenic animals using promoter of bovine alpha S1 casein chromosomal gene.
                                                                                                                                                                                                                                                                                                                                                                VCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                         431
                                                                  ;
                                              Length 431;
                                                                                                                                                                                                                                                                                                                                                                                 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
                                                                 Indels
                                          100.0%; Score 2301; DB 11;
100.0%; Pred. No. 5.7e-178;
ive 0; Mismatches 0;
PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human pro-Urokinase encoded by plasmid pUK1
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                     E.coli strain C600SF8 was transformed with recombinant plasmid containing ds DNA derived from human pharynx cancer cell strain petroit 562. 10000 colonies were screened and one betroit colone was identified. Plasmid pUKI was isolated and found to contain the coding region and 3' non-coding region of pro-UK downstream of Cys(H1). Four silent substitutions were identified o.f. Holmes et al., Biotechnology, vol.3, p.923 (1985) as follows: (sic) Asn(254), AAC to AAT; Leu(340), CTA to CTG; Pro(345), CCC to CCA; Gln(346), CAA to CAG.
See also AAQ06045-Q06048 and AAQ06392.
(Updated on 25-MAR-2003 to correct PA field.)
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100.0%; Pred. No. 5.7e-178;
iive 0; Mismatches 0;
Example; Table 1; 55pp; English
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                                                                                        "clevage of this site produces a bioactive two chain form of urokinase"
                                                                                                                                                                                                                                                                                                                                                                                                                                            Prodn. of human urokinase glycoproteins - using a recombinant expression system used for the treatment of vascular diseases conditions.
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100.0%; Pred. No. 5.7e-178;
iive 0; Mismatches 0;
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83US-0474930.
83EP-0103629.
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                                                                                                                                                       Sequences (AAQS5771-72) are pro-urokinase derivatives. The productive an inserted sugar moeity having an amino acid substituted, depleted or inserted variant around the thrombin cleavage site. They also have a long half-life allowing them to be used in the treatment of thrombosis.
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                                                                        Novel human pro-urokinase derivs. having long half-life - with high thrombolytic activity, useful for treatment of thrombosis
                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 2301; DB 15; Length 431; Best Local Similarity 100.0%; Pred. No. 5.7e-178; Matches 411; Conservative 0; Mismatches 0; Indels 0;
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pulmonary embolism.
                                                                                                                            Disclosure; Page 15-17; 29pp; Japanese
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70..151
91..133
122..146
168..299
209..225
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                     1994-030907/04.
                                                                                                                                                                                                                                                                                431 AA;
                     WPI; 1994-030907,
N-PSDB; AAQ55772
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Disulfide-bond
Disulfide-bond
Disulfide-bond
Disulfide-bond
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lin X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9957251-A2
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121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is human plasminogen activator urokinase (u-PA), a serine protease which hydrolyses a peptide bond in human plasminogen to convert it to its active form, plasmin. Plasminogen is the principal serine protease zymogen in the extracellular fluids of vertebrates. Plasmin is implicated in pericellular proteclysts associated with a wide range of physiological and pathological processes. Plasminogen activators regulate plasminogen expression either by hydrolysing a peptide bond, as in the case of u-PA, or by forming tight binding complexes with plasminogen to spontaneously convert it to plasmin. Review of sequence homologies of several plasminogen activators and chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       has identified a six amino acid peptide involved in plasminogen activation. This peptide is particularly useful when inserted between amino acid residues 644 and 645 of full length human plasminogen. Novel plasminogen activators have been made based upon the plasminogen activation/recognition site of plasminogen binding proteins. The polypoptides are useful in preparing thrombolytic agents for treating blood clotting disorders such as heart attack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polypeptide with plasminogen activator activity useful as thrombolytic agent for treating blood clot disorders e.g. heart attack, comprises 10 amino acid peptide fragment for recognition or activation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
 361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKBENGLAL 411
                 381 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 2301; DB 21; Length 431; 100.0%; Pred. No. 5.7e-178; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                       Human; serine protease; plasminogen activator; cardiant; thrombolytic; heart attack; stroke; blood clotting disorder.
                                                                                                                                                                              Human plasminogen activator urokinase, u-PA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure, Page 26-28; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                       (OKLA-) OKLAHOMA MEDICAL RES FOUND.
                                                                                                AAY99591 standard; protein; 431 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                   Zhang XC, Tang JJN;
                                                                                                                                                                                                                                                                                                                                    99WO-US09991
                                                                                                                                                                                                                                                                                                                                                              98US-0110588
                                                                                                                                                       (first entry)
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Best Local Similarity 100.
Matches 411; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-422975/36.
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                                                                                                                                                                                                                                                                                                                                                              02-DEC-1998;
                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                    06-MAY-1999;
                                                                                                                                                     13-SEP-2000
                                                                                                                                                                                                                                                                                                         08-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plasminogen
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                                                                                                                            AAY99591;
                                                                                                                                                                                                                                                                                                                                                                                                                     Lin X,
                                                                       RESULT 16
                                                                                      AAY99591
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PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
                                                                                     141 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 200
                                                                                                                                                                                                                                                                              201 RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI 260
                                                                                                                                                                                                                                                                                                                                                                             241 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                         ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321 ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention describes a novel thrombolytic agent comprising streptokinase where at least one nonessential portion has been modified. The invention also describes a method of forming a thrombolytic agent comprising determining a nonessential portion of streptokinase and modifying the nonessential portion to render the resulting protein less antigenic. The modified streptokinase is used to treat blood clot disorders, such as heart attacks. The modified streptokinase has less antigenicity than streptokinase but is still able to complex plasminogen and lead to plasminogen activation. Modified streptokinase with the nonessential portions removed or truncated simplify the molecule. Such smaller proteins are cheaper and easier to produce. This sequence represents a fragment of the human urokinase protein which is used in the description of the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New thrombolytic agents derived from modified humanized streptokinase,
                                                                                                                                                                                    181 RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKBENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Urokinase; human; thrombolytic agent; streptokinase; antigenic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful for treating blood clot disorders
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DB 21; Length 431;

Score 2301;

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Disclosure; Page 550; 572pp; English.
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AAG79460
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
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Pred. No. 5.7e-178;
; Mismatches 0;
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ilarity 100.0%; F
Conservative 0;
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N-PSDB; AAH28220.
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Best Local
Matches 41
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The specification describes a pharmaceutical composition, comprising a growth factor, an inhibitor agent, i.e. a procease. The inhibitor agent in a protease. The inhibitor agent in a protease, that is upregulated in a damaged tissue such as a wound environment. Growth factors which are included in the composition of the invention are platelet-derived growth factor (PDGF), fibroblast growth factor (FGF), connective tissue derived growth factor (FGF), connective tissue derived growth factor (FGF), ransforming growth factor (FGF), ransforming growth factor (FGF), and chrysalın. Inhibitors which are included in the composition of the invention include inhibitors of urokinase-type composition is useful for the treatment of chronic damaged tissue, i.e. wounds and dermal ulcers. The present sequence represents a human urpa, and is used to produce the composition of the invention of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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Pred. No. 5.7e-178;
Mismatches 0;
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100.0%;
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Best Local Similarity
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This sequence represents single chain prepro-urokinase (sc-uph).

Pro-urokinase (amino acids 21-41) with a cleavage between amino acids 178 and 179 gives high molecular weight urokinase-type acids 178 and 179 gives high molecular weight urokinase-type plasminogen activator (HMW-uph). HWW-uph is a protein consisting of two peptide chains linked by a di-sulphide bond. The chains, and 179 of pro-urokinase- HWW-uph includes an EGF-like domain, a kringle domain and a urokinase receptor (CD87) binding domain. HWW-uph is then cleaved between amino acids 155 and 156 to give low molecular weight urokinase-type plasminogen activator (LMW-uph) (amino acids 156-178 and 179-431), that has no plasminogen activator activity. Sc-uph, or fragments of it, may be used in the anti-HIV activity. Sc-uph, or fragments of it, may be used in the anti-HIV cuph cup agents act useful for trearing HIV-infected humans for suppression of reproduction of HIV. The anti-HIV agents act by a mechanism of action different from those of conventional drugs, widening the choice of therapeutics agents and avoiding problems of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
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                                                                           "With a cleavage between amino acids 178-179"
                                                                                                                                  /note= "With a cleavage between amino acids 178-179"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anti-HIV agents, comprises ligand molecule that binds to CD87, e.g. high molecular weight urokinase-type plasminogen activator, amino-terminal fragment or an anti-CD87 antibody
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0
                                     21..431
/label= pro-urokinase/HMW-uPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
1..20
/note= "Signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 20-23; 38pp; English.
                                                                                            156..431
/label= LMW-uPA
                                                                                                                                                                                                                                                                                              20-FEB-2001; 2001JP-0042655.
19-JUN-2001; 2001JP-0184284.
                                                                                                                                                                                                                                                      15-FEB-2002; 2002EP-0003555.
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The invention relates to a polynucleotide comprising a first nucleotide sequence (NS1) comprising a PLAU (plasminogen activator, urokinase, a serine protease) isogene selected from isogenes 1-9 and 11-20 given in the specification, where each isogene comprises the regions of the contract of the specification, where each isogene comprises the regions of the PLAU gene or CDNA and is further defined by the corresponding sequence of polymorphisms (SMP). Also included are methods of haplotyphing (and predicting that the plate of the PLAU gene of an individual, identifying an association between a trait and at least one haplotype or haplotype pair of the PLAU gene, an isolated oligonucleotide for detecting a polymorphism in the PLAU gene, a recombinant non-human organism transformed or transfected with the gene or CDNA, fragments of the polymorphism in the PLAU gene pairs encompassing a polymorphic or site, an isolated polymorphic variant PLAU protein or fragment, and isolated polymorphic variant PLAU protein or fragment, and isolated polymorphic variant PLAU a computer system for storing and analysing polymorphism data for the PLAU gene and a genome cancers. The methods are useful for treating thrombolytic disorders and cancers. The methods are useful for treating thrombolytic disorders and cancers. The methods are useful for treating thrombolytic disorders and cancers. The methods are useful for treating thrombolytic disorders and cancers. The methods are useful for improving the efficiency and cancers. The methods are useful for improving the afficiency and cancers. The methods are useful for treating thrombolytic disorders and cancers associated with PLAU activity, in validating PLAU as a drug carget and in the design of clinical trials for treating a specific condition of disease associated with PLAU activity. The antibody is
261 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 320
                                                                              ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 360
                                                                                                                        321 ENSTDYLYPEQLKMTVVKLIGHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genetic variants of Plasminogen activator, Urokinase (PLAU) isogenes, useful for improving efficiency and reliability in drug development for treating thrombolytic disorders and cancer
                                                                                                                                                                                     361 VCSLOGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                    381 VCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytostatic; serine protease; thrombolytic disorder; isogene; pulmonary embolism; chromosome 10q24-qter; haplotype; genotype; SNP; single nucleotide polymorphism; thrombolytic; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; Plasminogen activator; urokinase; PLAU; cancer; enzyme;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human plasminogen activator, urokinase (PLAU).
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N-PSDB; ABK86597, ABK86598.
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useful in diagnostic, prognostic and therapeutic methods. PLAU polynucleotides are useful in studying the expression and function of PLAU, and in expressing PLAU protein for use in screening for candidate drugs to treat diseases related to PLAU activity. The gene for PLAU is located on chromosome 10q24-qter. The present sequence represents the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human, cancer, urokinase-type plasminogen activator; uPA; inflammation, Ets-1 transcription factor; N-acetylglucosaminyltransferase V; GnT-V; matrix-type metalloproteinase; MMP-1; MMP-3; gene therapy.
                                                                                                                                                                                                                      LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
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                                                                                                                                                SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                             Local Similarity 100.
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N-PSDB; AAD27855.
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE17128 standard;
                                                                    431 AA;
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                           drugs to treat t is located on che PLAU protein.
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                                                                                                                                                                                       The invention relates to a method of identifying a compound for treating cancer. The method involves detecting the expression of a panel of sequences selected from transcription factor Ets-1, urokinase-type plasminogen activator (uPA), Nacetylglucosaminyltransferase V (GnT-V), matrix-type metalloproteinase (MMP)-1 and MMP-3 in the cell. The method is useful for identifying a compound that affects a cell, particularly a cancer cell or glioma cell, or a cell that is involved in inflammation. It is used for diagnosing and/or treating cancer or other conditions that are affected by one or more members of a panel of genes or their protein product. The method is also useful for drug discovery, drug safety evaluations and in gene therapy. The present sequence is human upA
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                     transcription factor Ets-1, N-acetylglucosaminyltransferase V, urokinase-type plasminogen activator, matrix-type metalloproteinase-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 2301; DB 23;
100.0%; Pred. No. 5.7e-178;
ive 0; Mismatches 0;
compound for treating cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lung cancer-associated polypeptide #140.
                                                                                                                                            Example 1; Page 62-63; 63pp; English
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                                                                               gene expression
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431 AA;
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polypeptides of the invention.
                                                                                                                        RESULT 23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                methods are useful for treating lung cancer, such as small cell lung cancer, non-small cell lung cancer or other benign or precancerous lessions, e.g. atelectasis, emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis, Mryersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and bronchiectasis. The genes, polynucleotides and polypeptides are useful for diagnostic purposes and as targets for screening for therapeutic compounds that modulate lung cancer, such as antibodies. Sequences ABUS6408-ABUS6745 represent lung cancer, such as polypeptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method for detecting a lung cancer-associated transcript in a cell from a patient, comprising contacting a biological sample from the patient with a polynucleotide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits increased or decreased expression in lung cancer samples. Lung cancer-associated polynucleotides and polypeptides are used for identifying a compound that modulates a lung cancer-associated polypeptide, for inhibiting proliferation of a lung cancer-associated cell to treat lung cancer in a patient and for treating a mammal having lung cancer by administering a modulatory compound identified. The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 SNETHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 80
                                                                                                                                                                                                                                                                                 Detecting a lung cancer-associated transcript in a cell from a patient for treating lung cancer, by contacting a biological sample from the patient with a polynucleotide that exhibits increased or decreased
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                                                                                                                                                                                                                                                                                                                                                           Claim 27; Page 296; 453pp; English.
                                                                                                                                                                                    (EOSB-) EOS BIOTECHNOLOGY INC
                                                                              18-APR-2001; 2001US-284770P.
                                                                                                          09-NOV-2001; 2001US-339245P.
13-NOV-2001; 2001US-350666P.
29-NOV-2001; 2001US-334370P.
                                                    18-APR-2002; 2002WO-US12476
                                                                                                                                                     12-APR-2002; 2002US-372246P
                                                                                                                                                                                                                                                                                                                                 expression in lung cancer
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Matches 411; Conservative
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                                                                                                                                                                                                                                                           N-PSDB; ABX76275.
WO200286443-A2.
                        31-OCT-2002
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transcript in a cell from a method to detecting a contacting a patient, comprising contacting a biological sample from the patient with a polymoclectide that selectively hybridises to a sequence that is at least 80 % identical to a gene that exhibits increased or decreased expression in lung cancer samples. Lung cancer-associated polymoclectides and polypeptides are used for identifying a compound that modulates a lung cancer-associated polypeptide, for inhibiting proliferation of a lung cancer-associated polypeptide, for inhibiting proliferation of a lung cancer-associated cell to treat lung cancer in a patient and for treating a mammal having lung cancer by administering a modulatory compound identified. The methods are useful for treating lung cancer, such as small cell lung cancer, such as small cell lung cancer or other benign or precancerous cancer, non-small cell lung cancer or other benign or precancerous pulmonary disease, fibrosis, hypersensitivity pneumonitis, intersitial pulmonary disease, fibrosis, hypersensitivity pneumonitis, intersitial pulmonary disease, fibrosis, hypersensitivity pneumonitis, and polypeptides are useful for diagnostic purposes and as targets for and polypeptides are useful for diagnostic purposes and as targets for and polypeptides are useful for diagnostic purposes and as targets for antibuted and compounds that modulate lung cancer, such as an inceriated control or control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control control contr
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ENSTDYLYPEQLIMMTVVKLISHRECQOPHYYGSEVTTYMLCAADPQWKTDSCQGDSGGPL 360
                                                                             321 ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
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                                                                                                                                                                                                                                        361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKBENGLAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABU56708 standard; Protein; 431 AA
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09-NOV-2001; 2001US-339245P.
13-NOV-2001; 2001US-350666P.
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12-APR-2002; 2002US-372246P.
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PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 200
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                        A new compound, which is 8-50 nucleobases in length targeted to a nucleic acid molecule encoding urckinase plasminogen activator, specifically hybridises with and inhibits the expression of urckinase plasminogen activator. The compound is useful for preparing a composition for treating (e.g. by gene therapy) hyperproliferative disorder, cancer e.g., breast, colon, bone, brain, ovary, cervix, endometrium, stomach or kidney cancer, or tumour metastasis. This is the amino acid sequence of a urckinase plasminogen activator.
                                                                                                                                                                                                                                                                                                         KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK
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Page 101-102; 153pp; English.
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Best Local Similarity 100.
Matches 411; Conservative
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Disclosure;
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21-MAY-1992
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                                                                                                                                                                                                             PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense compound, useful for preparing a composition for treating hyperproliferative disorders, cancer e.g., breast, colon, bone, brain, ovary, cervix, endometrium, stomach or kidney cancer, or tumor metascasis.
                                                                                              SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Urokinase plasminogen activator; gene therapy; cancer; hyperproliferative disorder; cancer; breast cancer; colon cancer; bone cancer; brain cancer; ovary cancer; cervix cancer; endometrium cancer; stomach cancer; kidney cancer; tumour metastasis.
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                                                                                                                                                                                                                                                                                                                                                                                               VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                    0;
                                         Length 431;
                                                                   Indels
                                       DB 24;
                                      100.0%; Score 2301; DB 24;
100.0%; Pred. No. 5.7e-178;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human urokinase plasminogen activator
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; Protein; 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                Local Similarity Local to Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-058441/05.
N-PSDB; ABX17681.
            Ř.
            431
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-2001;
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            Seguence
                                       Query Match
                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                  321
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         381
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                                                                   Matches
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Location/Qualifiers

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AAR20536 standard; Protein; 436 AA.
                                              DE4122688-A
                                                                       16-JAN-1992
                                                                                                                                                                                Gozzini L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
           Protein
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ID AAR2
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                                                                                                                                                                                                                                                                                                                                                                                                                        KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIJGGEFTTJENQPWFAAIYRRH 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 360
                                                                                                                                                                                                                                                                                                                                                                                                       61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTOGEMKFEVENLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK
                                                                                                                                                                                                                                                                                                                                                       1 SNEIHQVPSNCDCINGGICVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                  way as PUK, e.g. for treating acute myocardial infarction, lung embolism and deep venous thrombosis. It has greater affinity for plasminogen bound to fibrin than for circulating plasminogen, so have high selectivity for thrombi with reduced chance of bleeding. Compared with the COOH-terminated cpds., it has a better stability sea of the cookypeptidases and prolonged half life.

See also AAQ20360, AQ20754-58 and AAX20356-38.

(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                         The protein has fibrinolytic activity and can be used in the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
                                                                              New amidated derivs. of human pro-urokinase - are fibrinolytic and can be used to treat acute myocardial infarction, pulmonary embolism or deep venous thrombosis
                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                        Length 434;
                                                                                                                                                                                                                                                                                                                              Indels
                                    Sarmientos
                                                                                                                                                                                                                                                                                                       100.0%; Score 2301; DB 13; 100.0%; Pred. No. 5.7e-178;
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                                    Perego R, Roncucci R,
                                                                                                                                                                                                                                                                                                                               0; Mismatches
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           (FARM ) FARMITALIA ERBA SRL CARLO
                                                                                                                                   Claim 4,8; Page 8; 18pp; German.
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(first entry)
                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 411; Conservative
                                    Visco C,
                                                             WPI; 1992-025815/04
                                                                                                                                                                                                                                                                                   434 AA;
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                                     Gozzini L,
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                                                                                                                                                                                                                                                                                    Seguence
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61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201 RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI 260
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNETHOVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The protein has fibrinolytic activity and can be used in the same way as PUK, e.g. for treating acute myocardial infarction, lung embolism and deep venous thrombosis. It has greater affinity for plasminogen bound to fibrin than for circulating plasminogen, so have high selectivity for thrombi with reduced chance of bleeding. Compared with the COOH-terminated cpds., it has a better stability against most carboxypeptidases and prolonged half life.

See also AAQ20360, AAQ20754-58 and AAR20536-38.
(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           431
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and can be used to treat acute myocardial infarction, pulmonary embolism or deep venous thrombosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New amidated derivs, of human pro-urokinase - are fibrinolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 434;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       381 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sarmientos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 2301; DB 13;
100.0%; Pred. No. 5.7e-178;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perego R, Roncucci R,
                                                                                                                                                                                                                                                                                                                                                                                                                     (FARM ) FARMITALIA ERBA SRL CARLO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 4,9; Page 8; 18pp; German.
/label= pro-UK
                                                                                                                                                                                                                            91DE-4122688
                                                                                                                                                                                                                                                                                                        90GB-0015369
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1992-025815/04.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434 AA;
                                                                                                                                                                                                                            09-JUL-1991;
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9 80 140

200 240 300 320

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241 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 300
                          261 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGK 320
                                                                                       ENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
                                                         ENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 360
                                                                                                                                                                                                                                                                                                                                                     Urokinase; inhibitor resistant; plasminogen; human; whey acid protein; plasminogen activator inhibitor-1; plasminogen activator; protease; WAP; plasmin; proteolytic enzyme; clot lysis; heart attack; heart muscle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198..203
/note= "deleted in modified urokinase of the invention"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents the full length urokinase, including the whey acid protein (WAP) signal peptide. This sequence has residues 179-184 of the urokinase sequence deleted to create the modified urokinase of the invention. The modified urokinase (see AAW2459) cleaves plasminogen, and has a lower binding affinity for plasminogen activator inhibitor-1 than the corresponding unmodified urokinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Deletion-modified urokinase protein - with increased resistance to inhibition by plasminogen activator inhibitor-1
                                                                                                                   361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                    'note= "whey acid protein signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Kringle-1 domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Column 15-18; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                           AAW24578 standard; Protein; 430 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "urokinase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "E-domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "P-domain"
                                                                                                                                                                                                                                                                                                                               Inhibitor resistant urokinase.
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92US-0942157.
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                                                                                                                                                                                                                                                                                     (updated)
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note=
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                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
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11-NOV-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                         AAW24578;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 KASTDIMGRPCLPMNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81 KASTDIWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The protein has fibrinolytic activity and can be used in the same way as PUK, e.g. for treating acute myocardial infarction, lung embolism and deep venous thrombosis. It has greater affinity for plasminogen bound to fibrin than for circulating plasminogen, so have high selectivity for thrombi with reduced chance of bleeding. Compared with the COOH-terminated cpds., it has a better stability against most carboxypeptidases and prolonged half life.

See also AAQ20360, AAQ20754-58 and AAR20356-38.
(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                            /note= "may be any amino acid, pref. Lys or Arg, or 0-4 amino acids may be omitted"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New amidated derivs. of human pro-urokinase - are fibrinolytic and can be used to treat acute myocardial infarction, pulmonary embolism or deep venous thrombosis
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100.0%; Score 2301; DB 13; Length 436;

Best Local Similarity 100.0%; Pred. No. 5.8e-178;

Matches 411; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gozzini L, Visco C, Perego R, Roncucci R, Sarmientos P;
                                                                                                                                                                                                   /label= pro-UK
/note= "the amidated form of pro-UK is
claimed in claim 1"
                                                                                                                Pro-urokinase; plasminogen activator; ss.
                                                                                    Amidated deriv. of pro-urokinase (1).
                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                        (FARM ) FARMITALIA ERBA SRL CARLO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1,4,7; Page 8; 18pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                            91GB-0014846.
                                                                                                                                                                                                                                                                                                                                                                  91DE-4122688.
                                                                                                                                                                                                                                                                                                                                                                                              90GB-0015369
                                                        (first entry)
                                                                                                                                                                                                                                                433..436
                                          (nbdated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1992-025815/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 436 AA;
                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                   09-JUL-1991;
                                                                                                                                                                                                                                                                                                                                                                                               12-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                            10-JUL-1991;
                                                                                                                                               Homo sapiens
                                          25-MAR-2003
                                                        21-MAY-1992
                                                                                                                                                                                                                                                                                                           DE4122688-A
                                                                                                                                                                                                                                                                                                                                      16-JAN-1992
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A low mol. wt. polypeptide plasminogen activator (PA) is claimed which is formed from amino acids 150-411 of prourokinase. The preferred intiation region for the low mol. wt. PA is indicated (see FT). A low mol wt. PA can be injected into blood in the body in vivo to dissolve clots without harm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SNEIHQVPSNCDCLINGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENSTDYLYPEQLKWTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
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                                                                                                                                                                                                                           comprising the amino acid portion of prourokinase from 150 to 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
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                                                                                                                                                                                                       Modified low mol. wt. plasmingen activator- formed of amino
                                                                                                                                                                                                                                                                                                                                                                      (Updated on 31-OCT-2002 to add missing OS field.) (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2298; DB 10;
Pred. No. 9.9e-178;
1; Mismatches 0;
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                                                                                         (COLB ) COLLABORATIVE RES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Non-glycosylated prourokinase.
                                                                                                                                                                                                                                                          Fig 1; Page -; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.9%;
99.8%;
                                                          88US-0248727.
                                            87US-0107370
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(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 99.8
Matches 410; Conservative
                                                                                                                                                        WPI; 1989-146601/20
                                                                                                                                                                                                                                                                                                                                                                                                                                         431 AA;
                                                                                                                                                                        N-PSDB; AAN91740
                                                          27-SEP-1988;
                                          09-OCT-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
27-JUN-1990
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Urokinase is one of two types of mammalian plasminogen activators (PA), the other being tissue type PA. PAs catalyse the conversion of the circulating zymogen plasminogen to the broad spectrum protease plasmin by limited proteolysis. The modified urokinase can be used for clot lysis, specifically to dissolve heart attack-causing clots before they cause permanent damage to heart muscle. The urokinase mutant is more resistant to inhibition by plasminogen activator inhibitors than the unmodified urokinase. It can be selectively expressed and secreted from the mammary glands of transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                              KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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/note= "Preferred initiation region for the low mol. wt.
plasminogen activators."
                                                                                                                                                                                                                                                                                                            SNEIHQVESNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                           KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGRHNYCRNPDNRRPWCYVQVGLK
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                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                      Length 430;
                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                   Score 2298; DB 18;
Pred. No. 9.9e-178;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21..431
/note= "Mature prourokinase."
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                                                                                                                                                                                                                   99.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
(updated)
(first entry)
                                                                                                                                                                                                               Query Match
Best Local Similarity 99.89
Matches 410; Conservative
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                                                                                                                                                                                    430 AA;
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31-OCT-2002
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Protein
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Gaps

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Indels

Length 431;

80

180

200

300 320 360

Low

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myocardial infarction.

DNA encoding the protein was sequenced from plasmid pCGE195, a subclone of two inserts isolated by screening a cDNA library prepd. from kidney cell RNA. One of the original inserts, clone CGF31 (tag o: started in the middle of the signal sequence. Mutants of the sequence, pref. in which gcc (Ala) replaces aat (Asn) at nucleotides 1002-1004 (residue 302) are used to transform hosts for the prodn. of non-glycosylated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91 KASTDTWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLVQECMVHDCADGKKPSSPPBBLKFQCGQKTLRPRFKIIGGBFTTIBNQPWFAAIYRRH 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201 RGSSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNIQGEMKFEVENLI 260
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
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                                                                                                                                                                                                                                                                                                                            New non-glycosylated, secreted plasminogen activator - pref. with asparagine replaced or deleted, useful for treating blood clots, expressed in non-mammalian cells.
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Pred. No. 9.9e-178;
1; Mismatches 0; Indels 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prourokinase. (Updated on 25-MAR-2003 to correct PA field.)
                                      Location/Qualifiers
1..20
/label= signal sequence
                                                                                                                                                                                                                                                        Broeze RJ;
                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page -; pp; English
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88US-0211279.
                                                                                                                                                       88EP-0306334.
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Matches 410; Conservative
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                Homo sapiens.
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29-JUN-1988;
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Gaps

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240

Search completed: December 3, 2003, 14:39:12 Job time : 67.7422 secs

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GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd.
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protein search, using sw model protein ĕ December Run on:

3, 2003, 14:34:58; Search time 21.2586 Seconds (without alignments) 1859.261 Million cell updates/sec

US-09-880-503-3 2301 Title: Perfect

score:

1 SNELHQVPSNCDCLNGGTCV......VSHFLPWIRSHTKEENGLAL Sequence:

411

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 segs, 96168682 residues Searched:

Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 Minimum DB seq Maximum DB seq

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

pirl:\*
pir3:\*
pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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## ALIGNMENTS

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u-plasminogen activator (EC 3.4.21.73) precursor [validated] - human N;Alternate names: cellular plasminogen activator; urokinase; urokinase-type plasminog N;Contains: urokinase-type plasminogen activator chain A; urokinase-type plasminogen a

C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 17-Dec-1982 #sequence\_revision 04-Dec-1986 #text\_change 15-Sep-2000
C;Accession: A00931; IS2209; JT0102; A37561; I38102; S65783; A37562; A37564; A
R;Riccio, A.; Grimaldi, G.; Verde, P.; Sebastio, G.; Boast, S.; Blasi, F.
Nucleic Acids Res. 13, 2759-2771, 1985
A;Title: The human urokinase-plasminogen activator gene and its promoter.
A;Reference number: A00931; MUID:85215647; PMID:2987867 A; Accession: A00931

A Molecule type: DNA
A; Residues: 1-431 <RIC>
A; Residues: 1-431 <RIC>
A; Cross-references: GB.X02419; NID:g37601; PIDN:CAA26268.1; PID:g1834524
A; Cross-references: GB.X02419; NID:g37601; PIDN:CAA26268.1; PID:g1834524
A; Note: the authors translated the codon ATG for residue 214 as Ile
R; Nagamine, Y:; Pearson, D:; Grattan, M.
Biochem. Biophys. Res. Commun. 132, 563-569, 1985
A; Title: Exon-intron boundary sliding in the generation of two mRNAs coding for porcin
A; Reference number: I52209; MUID:86050639; PMID:3933505

A; Accession: I52209

A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Ross-references: GB:KO3027; NID:g340174; PIDN:AAA61257.1; PID:g340175
B;Nagal, M.; Hiramatsu, R.; Kaneda, T.; Hayasuke, N.; Arimura, H.; Nishida, M.; Suyama
Gene 36, 183-188, 1988
A;Title: Molecular cloning of cDNA coding for human preprourokinase.
A;Reference number: JT0102; MUID:86056954; PMID:2415429

A; Accession: JT0102

A, Molecule type: mRNA A, Residues: 1-213,'I',215-431 <NAG2> A, Cross-references: GB. K03226, NID: G340155; PIDN: AAC97138.1; PID: G340158; GB. D00244; N R, Verde, P.; Stoppelli, M.P.; Galeffi, P.; Di Nocera, P.; Blasi, F. Proc. Natl. Acad. Sci. U.S.A. 81, 4727-4731, 1984 A, Title: Identification and primary sequence of an unspliced human urokinase poly(A) + A, Reference number: A37561; MUID: 84272706; PMID: 6589620 A; Accession: A3756

A.Molecule type: mENA
A.Residues: 66-431 <VER>
A.Cross\_references: GB:D00244; NID:g220138
A.Cross\_references: GB:D00244; NID:g220138
B.Jacosp. P.; Crawdor, A.; Loriau, R.; Brockly, F.; Colau, B.; Chuchana, P.; van Else DNA 4, 139-146, 1985
A.Title: Molecular cloning, sequencing, and expression in Escherichia coli of human px A.Reference number: 138102; MUD:85203359; PMID:3888571
A.Accession: 138102
A.Status: preliminary
A.Molecule type: mRNA
A.Molecule type: mRNA
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Length 431; Indels 09

80

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200

240 260

180

300 320

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C;Keywords: fibrinolysis; glycoprotein; heterodimer; hydrolase; kringle; serine protein F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-30/Tomain: signal sequence #status predicted <SIG>
F;21-41/Product: urckinase-type plasminogen activator, single chain form #status predicted cs. 177/Product: urckinase-type plasminogen activator chain A #status experimental <F;31-62/Domain: kringle homology <RG>
F;31-61/Domain: kringle homology <RG>
F;10-431/Product: urckinase-type plasminogen activator chain Al #status experimental F;179-431/Product: urckinase-type plasminogen activator chain B #status experimental <F;179-431/Product: urckinase-type plasminogen activator chain B #status experimental <F;179-431/Product: urckinase-type plasminogen activator chain B #status experimental <F;179-419/Domain: trypsin homology <TRY>
F;179-419/Domain: trypsin homology <TRY>
F;38/Binding site: carbohydrate (Thr) (covelent) #status experimental F;178-179/Cleavage site: Lys-IIe (plasmin) #status experimental F;322/Binding site: carbohydrate (Asn) (covalent) #status experimental
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; Mismatches 0;
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Rivoshimoto, M.; Ushiyama, Y.; Sakai, M.; Tamaki, S.; Hara, H.; Takahashi, K.; Sawasaki, Buochim Biophys. Acta 1293, 88-89, 1996
A.Riceston. Biology. Acta 1203, 77, 215-431 4005
A.Riceston. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology. Biology
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Biochemistry 31, 9562-9571, 1950.
Biochemistry 31, 9562-9571, 1950.
Birth, R.A.G.; Dobson, C.M.
Biochemistry 31, 9562-9571, 1950.
Birth as stipped and sasignments and secondary structure of the kringle domain fareference number: A44375; MUID: 9303110; PMID: 1327118
A;Contents: annotation; conformation and disulfide bond assignments by (1)H-NMR submitted to the Brookhaven Protein Data Bank, January 1994
A;Reference number: A66822; PDB:1URK
B;Spraggon, G.S.; Phillips, C.; Nowak, U.K.; Ponting, C.P.; Saunders, D.; Dobson, C.M.; A;Reference number: A66058; PDB:1LMM
B;Reference number: A66058; PDB:1LMM
B;Reference number: A66058; PDB:1LMM
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C,Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; try
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A; Genetics:
A; Gene: GDB:PLAU
A; Cross-references: GDB:119497; OMIM:191840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Map position: 10q24-10q24
A;Introns: 19/3; 29/1; 65/1; 123/2; 154/1; 227/2; 277/1; 324/1; 373/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Description: proteolytically activates plasminogen A; Pathway: fibrinolysis
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C,Accession: S14687; %08651
R,Au, Y.P.T.; Wang, T.W.; Clowes, A.W.
Nucleic Acids Res. 18, 3411, 1990
A,Titlein Nucleotide and deduced amino acid sequences of baboon urokinase-type plasminc
A,Reference number: S14687; MUID:90287734; PMID:2113276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-433 <AUY>
A; Residues: 1-433 <AUY>
A; Coss-references: EMBL:X51935; NID:g38130; PIDN:CAA36200.1; PID:g38131
C; Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology;
C; Keywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-176/Product: plasminogen activator chain A #status predicted <ACH>
F;30-61/Domain: EGF homology <EGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig. 150/Domain: Kringle homology <RRG>
Fil78-433/Product: plasminogen activator chain B #status predicted <BCH>
Fil78-421/Domain: trypsin homology <TRY>
Fil78-421/Domain: trypsin homology <TRY>
Fil78-421/Domain: trypsin homology <TRY>
Fil67-298,208-224,216-287,315-384,347-363,374-402/Disulfide bonds: #status predicted Fi223,274,378/Active site: His, Asp., Ser #status predicted
                                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u-plasminogen activator (EC 3.4.21.73) precursor - yellow baboon C;Species: Papio cynocephalus, Papio hamadryas cynocephalus (yellow baboon) C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 18-Jun-1999 C;Accession: S14687; S08651
ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL
                                                                                                                              VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
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                                                                                                                                                                                      VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL
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Nighterinace names: u.k.A. Cattle)
C;Species: Bos primigentus taurus (cattle)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jul-1999
C;Accession: JNDS60
R;Kraetzschmar, J.; Haendler, B.; Kojima, S.; Rifkin, D.B.; Schleuning, W.D.
Gene 125, 177-183, 1993
A;Ritle: Bovine urokinase-type plasminogen activator and its receptor: cloning and indi
A;Reference number: JNDS60, MUID:93216119; PMID:8385052
A;Accession: JNDS60
A;Accession: JNDS60
A;Accession: JNDS60
A;Residues: 1-433 «KRA-
A;Cross-references: GB:L03546; NID:g163800; PIDN:AAA51419.1; PID:g163801
C;Subperfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; t
C;Subperfamily: urokinase-type plasminogen activator chain A #status predicted «ACH-
F;1-179/Product: plasminogen activator chain A #status predicted «ACH-
F;3-64/Domain: kringle homology «RGF-
F;21-179/Product: plasminogen activator chain B #status predicted «AA2-
F;181-431/Domain: kringle homology «RGF-
F;181-431/Domain: trypsin homology «RTK-
F;181-431/Domain: trypsin homology «RYF-
F;181-421/Domain: trypsin homology «RYF-
F;1826,277,378/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                               289
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                                                                                            LKPLVQECMVHDCA-----DGKKPSSPPBELKFQCGQKTLRPRFKIIGGEFTTIEN 169
                                                                                                                                                                                                                      229
                                                                                                                                                                                                                                                                                                                                                      201 QPWFAAIYRRHRGGSVIYVCGGSLISPCWVVSATHCFINYQQKEDYIVYLGRQTLHSSTH 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       381 DSCQGDSGGPLVCSTQGRLTLTGIVSWGRECAMKDKPGVYTRVSRPLTWIHTHVGGENGL 440
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SHELHQESGASNCGCLNGGKCVSYKYFSNIQRCSCPKKFQGEHCEIDTSQTCFEGNGHSY
                                                                                                                                                                                                                                                                                                               170 QPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                            GEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQF
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76.8%; Score 1767; DB 1; Length 433;
Best Local Similarity 75.1%; Pred. No. 9e-129;
Matches 310; Conservative 45; Mismatches 56; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u-plasminogen activator (EC 3.4.21.73) precursor - bovine N;Alternate names: uPA
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NyAlternate names: upA
C;Species: Sus scrofa domestic pig)
C;Species: Sus scrofa domestic (domestic pig)
C;Accession: A00932
R;Aogamine, Y:, Pearson, D:, Altus, M.S.; Reich, E.
Nucleic Acids Res. 12, 95.25-9541, 1984
A;Title: cDNA and gene nucleotide sequence of porcine plasminogen activator.
A;Acference number: A00932
A;Reference number: A00932; MUID:85087954; PMID:6096832
A;Reference number: A00932; MUID:85087954; PMID:6096832
A;Reference number: A00932
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHEDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPNDPPFGTSCEITG 319
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                                                                                                                                                                              SREL-QVPSDCGCLNGGTCMSNKYFSSIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                          KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK
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                       Length 433;
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                                                                                     10;
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                93.4%; Score 2148; DB 1; 92.5%; Pred. No. 3.6e-158; ive 17; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80.8%; Score 1859.5; DB 1; 79.3%; Pred. No. 6.7e-136; iive 33; Mismatches 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 79.3%
Matches 334; Conservative
                                                 al Similarity 92.5
383; Conservative
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                                                 Best Local
Matches 38
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A Molecule type: DNA

A Mesidues: 1-433 < DEGS.

A Mesidues: 1-433 < DEGS.

A SCROSS-references: GB:MI7922; NID:g202296; PIDN:AAA40539.1; PID:g202297

B Belin, D.; Vassalli, J.D.; Combepine, C.; Godeau, R.; Nagamine, Y.; Reich, E.; Koche B Bur, J. Biochem. 148, 225-212, 1985

A; Title: Cloning, nucleotide sequencing and expression of cDNAs encoding mouse urokina A; Reference number: A24615; MUID:85179474; PMID:2985383
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Cygnerfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; t C; Keywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
C; Keywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
F; 21-178/Product: urokinase-type plasminogen activator chain A #status predicted AACH>F; 21-178/Domain: EGF homology KEGF>
F; 71-152/Domain: kringle homology KEGF>
F; 180-433/Product: urokinase-type plasminogen activator chain B #status predicted ABCH
F; 180-421/Domain: trypsin homology CTRY>
F; 180-21/219-227, 219-220, 315-384, 347-363, 374-402/Disulfide bonds: #status predicted
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RPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMV 128
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                                                                                                                                                                                                                                                                                                                                                                       DTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYL 307
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               u-plasminogen activator (EC 3.4.21.73) precursor - mouse
C;Species: Mus musculus (house mouse)
C;Dacte: 30-Sep-1987 #sequence revision 30-Sep-1987 #text_change 18-Jun-1999
C;Accession: A29420; A24615
R;Degen, S.J.F; Heckel, J.L.; Reich, E.; Degen, J.L.
Biochemistry 26, 8270-8279, 1987
A;Title: The murine urokinase-type plasminogen activator gene.
A;Reference number: A29420; MUID:88163489; PMID:2831940
                                                                                                                                                        209 KCGGSLISPCWVASATHCFVNQPKKEEYVVYLGQSKRNSYNPGEMKFEVEQLILHEDFSD
                                HDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGS-VTY
                                                                                                                                                                                                                                               188 VCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQGR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129 HDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGS-VTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: mRNA
A;Residues: 1-433 <BEL>
A;Cross-references: GB:X02389; NID:g55127; PIDN:CAA26231.1; PID:g55128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLA 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389 PILSGIVSWGSGCAEKNKPGVYTRVSYFLNWIOSHIGEENGLA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;226,277,378/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63;
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72.2%; Score 1660.5; DB 1
Best Local Similarity 71.2%; Pred. No. 1.5e-120;
Matches 287; Conservative 52; Mismatches 63;
69
                                                          89
                                                                                                                       129
                                                                                                                                                                              149
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A, Accesson: Sides in State and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask and Ask
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            u-plasminogen activator (EC 3.4.21.73) precursor - rat
NATecrnate names: plasminogen activator, urokinase-type; urinary plasminogen activator
C;Species: Rattus norvegicus (Norway rat)
C;Date: 18-Oct-1989 #sequence_revision 10-Feb-1995 #text_change 18-Jun-1999
R;Rabbani, S.A.
S;Accession: S24604; I60186; I53472; S18932
S;Abbani, S.A.
S;Ubmitted to the EMBL Data Library, April 1992
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                                                                                    RHRGGSITYLCGGSLISPCWVVSATHCFIDHPKKENYIVYLGQSRLNSDTRGEMQFEVEK 260
                                                                                                                                                                                     261 LILHEDYSAESLAHHNDIALLKIRTSRGQCAQPSRSIQTICLPPEHEDAHSRTRCEITGF 320
                                                                                                                                                                                                                                                                         GKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGG 358
                                                                                                                                                                                                                                                                                                         GKENPSDYRYSDELKMTFVSLVSHEVCQQPHYYGAEVTDKMLCAADPQWETDSCQGDSGG 380
                             RHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVEN 238
                                                                                                                                                 LILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGF 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNCDCINGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 432;
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73.2%; Pred. No. 7.1e-123;
iive 47; Mismatches 60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: S24604
A; Accession: S24604
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A.Molecule type: mRNA
A.Gross-references: GB:M63988; NID:g166074; PIDN:AAA31593.1; PID:g166075
A.Gross-references: GB:M63988; NID:g166074; PIDN:AAA31593.1; PID:g166075
A.Gross-references: GB:M63988; NID:g166074; PIDN:AAA31593.1; PID:g166075
C; Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; serine proteinase
C; Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; serine proteinase
C; Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; serine proteinase
F; 12-26/Domain: propeptide #status predicted <PRO>
F; 72-77/Product: plasminogen activator alpha-2 #status predicted <PLA>
F; 72-77/Product: plasminogen activator alpha-2 #status predicted <PLA>
F; 72-77/Domain: EGF homology <KRG>
F; 72-709/Domain: trypain homology <KRG>
F; 72-70-70, R7-88, 92-109, 111-120, 128-209, 149-191, 180-204, 214-345, 257-273, 265-334, 359
F; 72-726/Cleavage site: His-Ser (plasmin) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                         t-plasminogen activator (EC 3.4.21.68) alpha-2 precursor - common vampire bat N;Alternate names: tissue plasminogen activator c;Species: Desmodus rotundus (common vampire bat) C;Species: Desmodus rotundus (common vampire bat) C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999 C;Accession: JS0598 R;Kraetzschmar, J; Haendler, B; Langer, G; Boidol, W; Bringmann, P; Alagon, A;Title: The plasminogen activator family from the salivary gland of the vampire BA;Reference number: JS0597; MUID:92039036; PMID:1937019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                   IYYAQRLMSATVNLISQDDCKNKYYDSTRVTDNMVCAGDPLWETDACKGDSGGPMVCEHN 382
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N/Alternate names: t-PA; tissue plasminogen activator
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Matches 178; Conservative
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N.Alternate names: upA
C.Species: Gallus gallus (chicken)
C.Species: Gallus gallus (chicken)
C.Species: Gallus gallus (chicken)
C.Sate: 20-701-1990 #sequence_revision 20-701-1990 #text_change 16-701-1999
C.Accession: A35005
R.Jteslie, N.D.; Kessler, C.A.; Bell, S.M.; Degen, J.L.
J. Biol. Chem. 265, 1339-1344, 1990
A.Title: The chicken urokinase-type plasminogen activator gene.
A.Rccession: A35005
A.Fitle: The chicken urokinase-type plasminogen activator gene.
A.Rccession: A35005
A.Status: preliminary
A.Residues: 1-434 cLES
A.Ccession: A35005
C.Superfamily: urokinase-type plasminogen activator, EGF homology; kringle homology; A;Rcsidues: 1-434 cLES
A.Cross-references: GB:J05187; NID:g212858; PIDN:AAA49131.1; PID:g212859
C.Superfamily: urokinase-type plasminogen activator chain A #status predicted cACH>
F;22-17/Product: urokinase-type plasminogen activator chain B #status predicted cACH>
F;70-158/Domain: kringle homology cRRS
F;77-128/Domain: kringle homology cRRS
F;77-13416/Domain: trypsin homology cRRS
F;173-416/Domain: trypsin homology cRRS
F;173-416/Domain: trypsin homology cRRS
F;177-272.373/Active site: His, Asp, Ser #status predicted
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                                                                                                                                                                                                                                                                                                                       DTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYL 307
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VCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSA
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47.4%; Pred. No. 6.6e-70;
tive 64; Mismatches 123; Indels 22
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A; Title: Differences between uterine and melanoma forms of tissue plasminogen activato A; Reference number: A91322; MUID:84158956; PMID:6538514
A; Accession: A91322
A; Molecule type: protein
A; Recidues: 33-45;311-320 < POH>
A; Residues: 33-45;311-320 < POH>
A; Residues: 33-45;311-320 < POH>
A; Residues: 33-45;311-320 < POH>
A; Experimental source: uterus
A; Experimental source: uterus
A; Experimental source: uterus
A; Mote: in the uterus, Cleavage of the activation peptide may also occur after 38-Gln
R; Van Zonneveld, A.J.; Veerman, H.; Pannekoek, H.
J. Biol. Chem. 261, 14214-14218, 1986
A; McTerence number: A3756; MUID:870311; PMID:3021732
A; Contents: annotation; fibrin binding site
R; Verheijen, J. H.; Caspers, M.P. M.; Chang, G.T. G.; de Munk, G.A.W.; Pouwels, P. H.; Eng
RBMO J. 5, 3525-3530, 1986
A; Title: Involvement of finger domain and kringle 2 domain of tissue-type plasminogen
A; Contents: annotation; fibrin binding site
A; Contents: annotation; fibrin binding site
R; Modd, II.; Numn, B.; Robinson, J.H.
Thromb: Haemost. 59, 523-528, 1988
A; Title: Isolation, identification and pharmacokinetic properties of human tissue-type
A; Contents: annotation: Account of Contents annotation of Contents of Contents annotation of Contents of Contents annotation of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Contents of Content
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A;Map position: 8p12-8p12
A;Map position: 8p12-8p12
A;Introns: 24/3; 39/1; 85/1; 122/1; 180/2; 211/1; 268/2; 297/1; 362/2; 408/1; 455/3; 5
C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat h
C;Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; plasma; serine proteinase
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-32/Domain: propeptide #status predicted <SIG>
F;33-562/Product: t-plasminogen activator #status experimental <MAT>
F;33-10/Product: t-plasminogen activator chain A #status experimental <ACH>
F;41-78/Domain: EGF homology <EGF>
F;86-119/Domain: EGF homology <EGF>
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Fi215-296/Domain: kringle homology «KR2»
Fi215-296/Domain: kringle homology «KR2»
Fi311-556/Domain: trypsin homology «TRX»
Fi311-556/Domain: trypsin homology «TRX»
Fi311-71,69-78,86-97,91-108,110-119,127-208,148-190,179-203,215-296,236-278,267-291,299
Fi312-383/Binding site: carbohydrate (Asn) (covalent) #status experimental
Fi219/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental
Fi310-311/Cleavage site: Arg-ile (plasmin, trypsin) #status experimental
Fi357,406/Active site: His, Asp #status predicted
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A,Residues: 1-36 kRE2.
A;Cross-references: GB:M11890; NID:g339837; PIDN:AAA61213.1; PID:g339839
C;Comment: Cleavage by plasmin or trypsin produces two chains held together by a singl
C;Comment: t-PA converts plasminogen to plasmin by hydrolyzing a single Arg-Val bond.
C;Comment: t-PA binds chain A of fibrin by kringle 2 and the fibronectin type I repeat
C;Gemetics:
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R;Fisher, R.; Waller, E.K.; Grossi, G.; Thompson, D.; Tizard, R.; Schleuning, W.D.
J. Biol. Chem. 260, 11223-11230, 1987
A;Title: Isolation and characterization of the human tissue-type plasminogen activator
A;Reference number: I55232; MUID:85289338; PMID:3161893
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A; Residues: 1-562 cHAR>
A; Residues: 1-562 cHAR>
A; Residues: 1-562 cHAR>
A; Constructions: 1-562 cHAR>
A; Note: parts of this sequence were confirmed by peptide sequencing
R; Reddy, V.B.; Garramone, A.J.; Sasak, H.; Wei, C.
A; Reddy, V.B.; Carramone, A.J.; Sasak, H.; Wei, C.
A; Title: Expression of human uterine tissue-type plasminogen activator in mouse cells
A; Reference number: 160110; MUID:88054470; PMID:2824147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Contents: annotation; novel forms of expressed recombinant t-PA R; Harris, T.J.R.; Patel, T.; Marston, F.A.O.; Little, S.; Emtage, J.S.; Opdenakker, Mol. Biol. Med. 3, 279-292, 1986
A; Title: Cloning of cDNA coding for human tissue-type plasminogen activator and its A; Reference number: A54645; MUID:86284200; PMID:3090401
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A,Status: preliminary; translated from GB/EMBL/DDBJ
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A; Residues: 1-562 <RES>
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          C. Species 11-10-0-139 Person suptems (many control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control
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CyAccession: 360599
R;Kraetzschmar, J.; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, P.; Alagon, A.; Dr. Graetzschmar, J.; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, P.; Alagon, A.; Dr. Gene 105, 229-237, 1991
A;Title: The plasminogen activator family from the salivary gland of the vampire bat Dr. A;Title: The plasminogen activator family from the salivary gland of the vampire bat Dr. A;Reference number: JS0597; MUID:92039036; PMID:1937019
A;Accession: JS0599
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69 RPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMV 128
                                                                                                                                                                                                                                                                                                                                                      245 AQNRRSSGERFLCGGILISSCWVLTAAHCFQERYPPQHLRVV-LGRTYRVKPGKEEQTFE 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKT----- 349
                                                                                                                                                                                                          VENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEI 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         t-plasminogen activator (BC 3.4.21.68) beta precursor - common vampire bat N;Alternate names: tissue plasminogen activator C;Species: Desmodus rotundus (common vampire bat)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SELRCFNGGTCWQAASFSDF-VCQCPKGYTGKQCEVDTHATCYKDQGVTYRGTWSTSESG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGYĞKHKSSSPPYSBQLKEGHVRLYPSSRCTSKFLFNKTVTKNMLCAGDTRSGEIHPNVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
                                                          RGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG
           ---SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                                                                                                                                                                                                                                                                                                               119 LKPLVQECMVHDCADGKKPSSPPEELKFQCG-QKTLRPRFKIIGGEFTTIENQPWFAAIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRHRGGS-VTYVCGGSLISPCWVISATHCFID-YPKKEDYIVYLGRSRLNSNTQGEMKFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSCOGDSGGPLVCSLOGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTK 404
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43.2%; Pred. No. 1.1e-58;
tive 59; Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F)226,275,382/Active site: His, Apr, V. .. F)345-361,378-406/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 43.24
Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                                                                      197 SKFILEFCSVPVCS-
                                                                                                                                                                   59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178
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A44369
t-plasminogen activator (EC 3.4.21.68) precursor - false vampire bat (Megaderma lyra)
C.Species: Megaderma lyra
C.Species: Megaderma lyra
C.Species: Megaderma lyra
C.Species: Megaderma lyra
C.Species: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C.Sacadell, S.J.; Duong, L.T.; Diehl, R.E.; York, J.D.; Hare, T.R.; Register, R.B.; Jacob
J. Biol. Chem. 264, 17947-17952, 1989
A.Statdell, Duong, L.T.; Diehl, R.E.; York, J.D.; Hare, T.R.; Register, R.B.; Jacob
J. Biol. Chem. 264, 17947-17952, 1989
A.Steference number: A34369; MUID:90036867; PMID:2509450
A.Steference number: A34369; MUID:90036867; PMID:2509450
A.Scession: A34369
A.Scession: A34369
A.Scession: A34369
A.Scession: A34369
C.Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat homology activator activator; EdF homology activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator activator ac
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256 AQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGL 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YRVVPGEEEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSVVRTVCLPP 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          283 MYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             434 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCA 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AD----POWKT-DSCOGDSGGPLVCSLOGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494 GDTRSGGPQANLADACQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYL 553
                                                                                                                                                                                                                                                                                                                                                                                                         223 RINSNIQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRIIQTICLPS 282
                                                                                                                                                                                                                                                                                                                                                              RGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196 GKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPS 255
                                                                                                                                                                                                                                                     ------SPPEELK-------FQCG-QKTLRPRFKIIGGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FITIENQPWFAAIYRRH-RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRS
                                                                                                                                                                                                          3 ELHQVP-SNCD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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                                                                  ; Score 864.5; DB 1; Length
; Pred. No. 5.1e-59;
56; Mismatches 157; Indels
                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;272,321,428/Active site: His, Asp, Ser #status predicted
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Ser #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119 LKPLVQECMVHDCADG----
                                                                  37.6%;
ilarity 38.1%;
Conservative 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397 PWIRSHTK 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DWIRDNMR 561
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Best Local Similarity
Matches 178; Conservat
                                                                         Query Match
Best Local Similarity
   F,513/Active site:
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A,Cross-references: GB:W63990; NID:g166078; PIDN:AAA31595.1; PID:g166079
A,Note: the authors translated the codon ATC for residue 75 as Thr
C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat h
C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat h
C;Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
F;1-21/Domain: signal sequence #status predicted <PRO>
F;2-36/Domain: propeptide #status predicted <PRO>
F;37-39/Product: plasminogen activator gamma #status predicted <PLA>
F;37-39/Product: plasminogen activator gamma #status predicted <PLA>
F;45-126/Domain: kringle homology <TRY>
F;45-126/Domain: trypsin homology <TRY>
F;45-126,66-108,77-121,131-262,174-190,182-251,276-351,308-324,341-369/Disulfide bonds
F;45-143/Cleavage site: His-Ser (plasmin) #status predicted
F;189,238,345/Active site: His, Asp, Ser #status predicted
F;315/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           546
                                                                                                                                    313 LYTDITSHPWQAAIFVKNKKSPGERFLCGGVLISSCWVLSAAHCFLERFPPNHLKVVLGR 372
                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                                                                                       373 TYRVVPGEEEQTFEIEKYIVHEEFDDDT--YDNDIALLQLRSQSKQCAQESSSVGTACLP 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---DPNLQLPDWTECELSGYGKHEASSPFFSDRLKEAHVRLYPSSRCTSQHLFNKTVTN 486
                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             282 SMYNDPQF----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTT 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338 KMLCAADP----QWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRV 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRN 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PDGASKPWCYVIKARKFTSESCSVPVCS------KATCGLRKYKEPQLHSTGGL 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FTTIENQPWFAAIYRRHRGGS-VTYVCGGSLISPCWVISATHCFID-YPKKEDYIVYLGR 221
                                 193 GKYTTEPCSTPACPKGKSEDCYVGKGVTYRGTHSLTTSQASCLPWNSIVLMGKSYTAWRT 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDNRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPBELKFQCG-QKTLRPRFKIIGGE 163
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t-plasminogen activator (EC 3.4.21.68) gamma precursor - common vampire bat NiAlternate names: tissue plasminogen activator (c.species: Desmodus rotundus (common vampire bat) (c.species: Ja-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                487 NMLCAGDTRSGGNODLHDACOGDSGGPLVCMINKOMTLTGIISWGLGCGOKDVFGVYTKV
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                                                                                                                                                                                                                        EFTTIENQPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR
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R;Kraetzschmar, J.; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, Gene 105, 229-237, 1991
A;Title: The plasminogen activator family from the salivary gland of A;Reference number: JS0597; MUID:92039036; PMID:1937019
A;Accession: JS0600
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A; Residues: 1-394 < KRA>
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C-plasminogen activator (EC 3.4.21.68) precursor - mouse
C-plasminogen activator (EC 3.4.21.68) precursor - mouse
C-plasminogen activator (EC 3.4.21.68) precursor - mouse
C-plasminogen activator (EC 3.4.21.68) precursor - mouse
C-plasminogen activator and activator activator and accession a A2994; S48205; S48207; S48206

Notecession: A2994; S48205; S48207; S48207

Notecenter number: A2994;
Notecenter number: A2994; MUID:88087303; PMID:2826484

Notecenter number: A2994;
Notecenter number: A2994; MUID:88087303; PMID:2826484

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Notecenter number: A2994; MUID:88087303; PMID:2826484

Notecenter number: A2994;
Notecenter number: A2994; MUID:98087303; PMID:2826484

Notecenter number: A2994;
Notecenter number: A2994; MUID:98087303; PMID:7523120

Notecenter number: A2994;
Notecenter number: A2994; Notecenter number: A298202; MUID:95010076; PMID:7523120

Notecenter number: A298202; MUID:95010076; PMID:7523120

Notecenter number: A298202; MUID:95010076; PMID:7523120

Notecenter number: A298202; MUID:95010076; PMID:7523120

Notecenter number: A298202; MUID:95010076; PMID:7523120

Notecenter number: A298202; MUID:95010076; PMID:7523120

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                                                                                                                                                                                                                        ELTGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKT----
                                                                                                                                                                                                                                                                                       360 ELSGYGKHKSSSPFYSEQLKEGHVRLYPSSRCAPKFLFNKTVTNNMLCAGDTRSGEIYPN
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                                                                                                                                                                                                                                                                                                                                                         -- DSCOGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSH 402
                                                                                                                                                                                                                                                                                                                                                                                          420 VHDACOGDSGGPLVCMNDNHMTLLGIISWGVGCGEKDVPGVYTKVTNYLGMIRDN 474
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qq	::	q	408 IIGGSSSLPGSHPWLAAIYIGDSFCAGSLVHTCWVVSAAHCFSHSPPRDSVSVV 461
į	200 SWYTHYBACTSTEATHAY XPENSTANT XPENS XWTWTYKI I SHPENONDHYKASTEATHAY A 141	è	219 IGBSPINGNTOGEWKERVENIJIHKNYGADTIAHHNNIALLKIRSKRGPCAOPSRTIOTI 278
7 A	EANLQLPDWTECELSGYGKHKSSSPFYSEQLKEGHVRLYPSSRCTSKFLFNKTVTNNMLC 32	7 යි	
λō	AADPQWKTDSCQGDSGGPLVCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHF 39	ð i	CLESMYNDPOFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECOOPHYYGSEVTTK 33
gg		g G	CLFEFGSTFFFAGHKCQLAGWGHLDENVSGISSSLKEALVFLVADHKCSSFEVIGADISFN 58
Š Š	LPWIRSHIK 40	à t	MLCAADPQWKTDSCOGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPCVYTRVSHFLPW
q	SBS LGWIRDINGK 5V3	8 8	SSI MICAGIFUCKSDACÇEDSGEFLACERNGVAILIGIISWEDGCGKLHREGVIIKVANIVDM 04.0 309 IDSHTK 204
RESULT A46688	16	દું તુ	:   INDRIR
hepatocyte C:Species:	yte growth factor activator (EC 3.4.21) precursor [validated] - human es: Homo sapiens (man)		
C;Date:	21-Sep-1993 #sequence_revision 25-Aug-1995 #text_change 08-Dec-2000 sion: A46688	RESULT 17 S28941	
R, Miyaz J. Biol		coagulation N; Alternate	on factor XIIa (EC 3.4.21.38) - guinea pig (fragment) te names: Hageman factor
A, Title d coagu	tease	C,Species C,Date: 2	: Cavia porcellus (guinea pig) 5-Feb-1994 #sequence_revision 03-Aug-1995 #text_change 21-Jan-2000
A;Refer A;Acces		C, Accessi R; Semba,	on: S28941 U.; Yamamoto, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe,
A;Molec A;Resid		Biochim. A; Title:	around tl
A; Cross		A; Referen	
A;Note: A;Note:	A, Note: Sequence extracted from NCBI backbone (NCBIN:131227, NCBIP:131228) A; Note: parts of the sequence, including the amino ends of the heavy and light chains, c	A; Molecul	A; Status: preliminary A; Molecule type: mRNA
C;Genet		A; Residue	( )
A; Cross		A;Cross-r C;Superfa	ererences: Embirabblis; NID:942578; FIDN:CAA48600.1; FID:949579 mily: coagulation factor XII; EGF homology; fibronectin type I repeat homolog
A; Map r C; Funct		C; Keyword F;46-87/D	s: hydrolase; serine proteinase omain: fibronectin type II repeat homology <1F2>
A; Descr	cleavage	F;134-169	/Domain: fibronectin type I repeat homology <fbl></fbl>
C; Super	speat homology;	F;216-294 F;216-294	/Domain: bdr Domoingy <rgs> /Domain: kringle homology <rgs> /Domain: trunein homology <rbs></rbs></rgs></rgs>
F;1-34/			The state of the s
F; 164-1	48/bomain: Libiouectin Lype in repeat nomology <162> 97/Domain: EGF homology <egi></egi>	Query Match Best Local S	31.2%; Score 718.5; DB 2; Length 603; imilarity 36.8%; Pred. No. 1e-47;
F;202-2 F;245-2	337/Domain: fibronectin type 1 repeat homology <1F1> 78/Domain: EGF homology <eg2></eg2>	Matches	
F;286-3 F;373-4 F;408-6	F;286-367/Domain: kringle homology «KRG» F;373-407/Product: hepatocyte growth factor activator light chain #status experimental < F;408-655/Product: hepatocyte growth factor activator heavy chain #status experimental <	Oy Op	13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL 72
F;408-6	. t	è	DINDERSON IGN IDMONANTIA DE LO TENNA CARANTA DE LO TENNA DE LO TEN
F;164-1 F;447,4	i m	Z qq	RWASEATYRNMIAEQALRRGLGHHTFCRNPDNDTRPWCFVWMGNRLSWEYCDLAQC
Query Best	Query Match 32.0%; Score 735.5; DB 1; Length 655; Best Local Similarity 37.6%; Pred. No. 5.4e-49;	ò	132 ADGKKPSSPPEELKFQCGOXTLRPR 156
Matches	0, Conservative 53	Db	295 QYPPQPTATPHD-REHPKLPSSRLSILQTPQPTTQNQALANELPETSSLLCGQR-LRKR 352
ð í	HQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYECNGH 56	ò	FKIIGGEFTTIENOPWFAAIY
q		qq	353 LSSLSRIVGGLVALPGAHPYIAALYWGSNFCSGSLIAPCWVLTAAHCLQNRPAP 406
දු දු	57 FYRKASIDIMGRECLPMNSAIVLQOTYHAHRSDALQLGLGKHNYCRNEDNRRRPWCYVQ 116	ያ <del>የ</del>	213 EDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKI-RSKEGRCAQP 271
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A 전	11/ VGLARLOQUEWWANDC	δ q	272 SRTIQTICLESMYNDPQFGTSCSITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPH 329
ζ	159 IIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY 218	δ	

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A:Pathway: blood coagulation; fibrinolysis
C:Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homology
C:Keywords: blood coagulation; fibrinolysis; glycoprotein; hydrolase; kringle; plasma;
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-372,373-615/Product: coagulation factor XIIa, alpha form #status experimental <AII:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Accession: JC5878
R;Hashimoto, K.; Tobe, T.; Sumiya, J.; Saguchi, K.; Sano, Y.; Nakano, Y.; Choi-Miura, 1 Bil. Pharm. Bull. 20, 1127-1130, 1997
A;Title: Cloning of the cDNA for a mouse homologue of human PHBP: A novel hyaluronan-b: A;Reference number: JC5878; MUID:98065239; PMID:9401717
            A; Description: factor XIIa catalyzes the proteolytic activation of plasminogen, plasma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262 R-SKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLI 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHRECQOPHYYGSEVITIKMLCAADPQWKTDSCQGDSGGPLVCSLQG---RMTLTGLVSWG 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72
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C;Species: Mus musculus (house mouse)
C;Date: 11-Mar-1998 #sequence_revision 11-Mar-1998 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183 CLHGGRCLE---VEGHRLCHCPVGYTGPFCDVDTKASCYDGRGLSYRGLARTTLSGAPCQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73 PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --ADGKKPSSPPEEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30.1%; Score 692; DB 1; Length 61 34.3%; Pred. No. 1.1e-45; ive 60; Mismatches 163; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A,Molecule type: mRNA
A,Residues: 1-558 <HAS>
C,Comment: This protein acts as serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     378 RGCALKDKPGVYTRVSHFLPWIRSHT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      613
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 34.38
Matches 153; Conservative
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A;Accession: A26814; MUID:86176794; PMID:3754331
A;Accession: A26814
A;Accession: A26814
A;Accession: A26814
A;Coss.references: GB:M31315; NID:9182291; PIDN:AAA70225.1; PID:9182292
R;COO1, D.E.; Edgell. C.J.S.; Louie, G.V.; Zoller, M.J.; Brayer, G.D.; MacGillivray, R.T.
J. Biol. Chem. 260, 13666-13676, 1985
A;Title: Characterization of human blood coagulation factor XII CDNA. Prediction of the A;Accession: A00930; MUID:86033830; PMID:3877053
A;Reference number: A00930; MUID:86033830; PMID:3877053
A;Residues: 14-332, G', 334-615 <CO2>
A;Coss.references: GB:M31723; NID:9180358; PIDN:AAA51966.1; PID:9180359
B;Cohemistry 25, 1525-1528, 1986
A;Title: Characterization of a cDNA coding for human factor XII (Hageman factor).
A;Reference number: A25191; MUID:86216049; PMID:301063
A;Rocossion: A25191
A;Residues: 146-378, G', 380-615 <QUE>
A;Coss.references: GB:M3147, 1985
A;Residues: 126378, G', 380-615 <QUE>
A;Reference number: A2248; MUID:8182674; PMID:3886654
A;Reference number: A2248; MUID:8182674; PMID:3886654
A;Reference number: A2248; MUID:8182674; PMID:3886654
A;Reference number: A2248; MUID:8182674; PMID:386655
A;Reference number: A2248; MUID:8182674; PMID:386655
A;Reference number: A2248; MUID:812291041; PMID:6604055
A;Reference number: A2248; MUID:812291041; PMID:6604055
A;Reference number: A21037; MUID:82291041; PMID:6604055
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A; Residues: 354-362;373-615 <FUJ>
A; Residues: 354-362;373-615 <FUJ>
B; Biol. R.J.; Ling, V.T.; Spellan, M.W.
J. Biol. Chem. 267, 5102-5107, 1992
A; Title: O-linked fucose is present in the first epidermal growth factor domain of factor A; Reference number: A4606; MUID:92184750; PMID:1544894
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A,Map position: 5q34-5qter
A,Introns: 19/3; 39/1; 72/2; 96/1; 133/1; 177/1; 212/1; 267/2; 340/1; 417/2; 463/1; 511/
C;Complex: factor XII, prekallikrein, and HWW kininogen form a complex bound to anionic
C;Function:
                                                                                                                                                                                                                                                                                         coagulation factor XIIa (EC 3.4.21.38) precursor [validated] - human NyAlternate names: Hageman factor (activated) C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Date: 27-Nov-1985 #sequence revision 30-Jun-1991 #text change 08-Dec-2000 C;Accession: A29411; A26814; A00930; A25191; A22248; A21037 R;Cool, D.E.; MacGillyrary, R.T.A.
R;Cool, D.E.; MacGillyrary, R.T.A.
A;Title: Chem. 262, 13662-13673, 1987
A;Title: Characterization of the human blood coagulation factor XII gene. Intron/exon A;Reference number: A29411; MUID:88007593; PMID:2888762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Accession: A29411
A;Molecule type: DCO>
A;Residues: 1-615 <CO>
A;Residues: 1-615 <CO>
A;Residues: 1-615 <CO
A;Cross-references: GB:M17466; GB:J02807; NID:g180355; PIDN:AAB59490.1; PID:g180357
R;Tripodi, M.; Citarella, F.; Guida, S.; Galeffi, P.; Fantoni, A.; Cortese, R.
Nucleic Acids Res. 14, 3146, 1986
A;Fille: CDNA sequence coding for human coagulation factor XII (Hageman).
A;Reference number: A26814; MUID:86176794; PMID:3754331
                                     584
GVYTRVSHFLPWIRSHT
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F;541/Active site: Ser #status predicted
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A; Residues: 1-560 <CHO>
A; Residues: 1-560 <CHO>
A; Cross-references: GB:S83182; NID:g1836158; PIDN:AAB46909.1; PID:g1836159
A; Experimental source: plasma
A; Note: parts of this sequence, including the amino ends of the mature chains, were dete
G; Genetics GB:HABP2; HABP; HGFAL
A; Cross-references: GDB:4573962
A; Cross-references: GDB:4573962
C; Complex: a disulfide-bonded heterodimer of chains produced from the same precursor; th
C; Superfamily: plasma hyaluronan-binding protein; EGF homology; kringle homology; trypsi
C; Keywords: chondroitin sulfate proteoglycan; glycoprotein; hyaluronic acid; hydrolase;
F; 1-23, Domain: signal sequence #status predicted <SIG>
F; 24-313, Product: plasma hyaluronan-binding protein, 50K chain #status predicted <50K>
F; 77-108 | Domain: EGF homology <EGI>
  protein; EGF homology; kringle homology; trypsi
                                                                                                                                                                               hyaluronan-binding protein small chain #status predicted <MATS
                                                     < MATL:
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A,Title: Purification and characterization of a novel hyaluronan-binding protein (PHBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T.; Sumiya, J.; Nakano, Y.; Sano, Y.; Mazda, T.; Tomita, M.
5. 1996
                                                     #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         215 YWNSHLLLQETYNMFMEDAETHGIAEHNFCRNPDGDHKPWCFVKVNSEKVKWEYCDVTVC 274
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----KFQ-CGQKTLRPRF--KIIGGEFTTIENQPWFAAIY--- 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMK 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 334 PLTTSMPQG----HFCGGALIHPCWVLTAAHC-TDINTKHLKVV-LGDQDLKKTESHEQT 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHISGWGVTETGE - - GSRQLLDAKVKLIANPLCNSRQLYDHTIDDSMICAGNLQKPGSDT 502
                                                                                                                                                                                                                                                                                                                                                                                                         CONGGVCSRHRRRSRF-TCACPDQYKGKFCEIGPD-DCYVGDGYSYRGKVSKTVNQNPCL 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQE-CMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275 PVPDTP-NPVESLLEPVMELPGFESCGKTEVAEHAVKRIYGGFKSTAGKHPWQVSLQTSL 333
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plasma hyaluronan-binding protein precursor - human
NyAlternate names: hepatocyte growth factor activator-like protein; PHBP
N;Contains: serine proteinse (EC 3.4.21.-)
C;Species: Homo sapiens (man)
C;Datte: 15-0ct-1995 #sequence_revision 16-Aug-1996 #text_change 19-Jul-2002
C;Accession: JG4795
R;Choi-Miura, N.H; Tobe, T; Sumiya, J; Nakano, Y; Sano, Y; Mazda, T; 7
                                                                                                                                                                                                                                                                                                                                                          CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                       37;
                                                                                                                                                                                                                                                          Length 558;
C, Superfamily: plasma hyaluronan-binding protein; EGF homology; P;1-23/Domain: signal sequence #status predicted <SIG>P;24-311/Product: plasma hyaluronan-binding protein large chain; P;7-106/Domain: EGF homology <EG1>P;113-145/Domain: EGF homology <EG2>P;15-185/Domain: EGF homology <EG3>P;15-185/Domain: EGF homology <EG3>P;15-274/Domain: EGF homology <EG3>P;12-258/Product: plasma hyaluronan-binding protein small chain P;312-548/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                       ; Score 674.5; DB 2;
; Pred. No. 2.3e-44;
58; Mismatches 164;
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                                                                                                                                                                                                                                                       29.3%;
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A, Molecule type: mRNA
A, Residues: 1-593 < SHI>
A, Residues: 1-593 < SHI>
A, Cross-references: GB:370164
A, Cross-references: GB:370164
A, Note: the authors translated the codon GAG for residue 23 as Val, GAG for residue 70
A, Note: the authors translated the codon GAG for residue 286 as 0
S Pro, CTC for residue 203 as Phe, GTG for residue 247 as Leu, CCG for residue 286 as 0
S Pro, CTC for residue 505 as Leu
R, Fullkawa, K.; Walsh, K.A.; Davie, B.W.
A; Title: Isolation and characterization of bovine factor XII (Hageman factor).
A; Reference number: A61329; MUDD:77182112; PMID:861210
A; Accession: A61329
A; Accession: A61329
A; Accession: A61329
A; Accession: A61329
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A; Accession: A61329
A; Accession: A61329
A; Accession: A61329
A; Accession: A61329
A; Accession: A61329
A; Accession: After an interpretation factor XII; EGF homology; fibronectin type I repeat homology circles: plasma; F; 37-78/Domain: EGF homology ceRG>
F; 207-287/Domain: Kringle homology ceRG>
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F; 207-287/Domain: proper procession homology ceRG>
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F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession homology ceRG>
F; 207-287/Domain: procession
F;194-276/Domain: kringle homology <RRI>
F;314-550/Domain: trypsin homology <PRY>
F;314-516/Product: plasma hyaluronan-binding protein, catalytic chain #status predicted
F;34,207/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;77-88,82-97,99-108,115-125,120-136,138-147,154-165,159-176,178-187,194-276,215-257,24
F;362,405,509/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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NyAlternate names: Hageman factor (activated)
C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Apr-1995 #sequence_revision 22-Apr-1995 #text_change 21-Jan-2000
C;Accession: 845281; A61329
R;Shibuya, Y.; Semba, U.; Okabe, H.; Kambara, T.; Yamamoto, T.
Biochim. Biophys. Acta 1206, 63-70, 1994
A;Title: Primary structure of bovine Hageman factor (blood coagulation factor XII):
A;Reference number: 845281; MUID:94242782; PMID:8186251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                277 SAQDVAYPEESPTEPSTKLPGFDSCGKTEIAERKIKRIYGGFKSTAGKHPWQASLQ---- 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CQNGATCSRHKRRSKF-TCACPDQFKGKFCEIG-SDDCYVGDGYSYRGKMNRTVNQHACL 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217 YWNSHILLIQENYNMFMEDABTHGIGEHNFCRNPDADEKPWCFIKYTNDKVKWEYCDVSAC 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182 GGSVT-----YVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMK 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWK-TD 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MVHDCA-DGKKPSSPPEELK--FQCGQKTLRPR--FKIIGGEFTTIENQPWFAAIYRHR 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -SSLPLTISMPQGHFCGGALIHPCWVLTAAHC-TDI-KTRHLKVVLGDQDLKKEEFHEQS 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQF--GT 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ECHISGWGVTETGK--GSRQLLDAKVKLIANTLCNSRQLYDHMIDDSMICAGNLQKPGQD 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCOGDSGGPLTCEKDGIYYVYGIVSWGLECG--KRPGVYTOVTKFLNMIKATIKSESG 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39;
                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 560;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .3e-43;
es 166;
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 28.7%; Score 661.5; I
Best Local Similarity 37.1%; Pred. No. 2.3e-
Matches 155; Conservative 58; Mismatches
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rdz.6-203-880-80

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Thu Dec

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A;Description: dissolves the fibrin of blood clots; acts as a proteclytic factor in a n ns the walls of the graafian follicle; also activates the urokinase-type plasminogen ac A;Pathway: fibrinolysis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Molecule type: protein
A,Residues: 1-560 <SCH>
K,Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Manneberg, M.
Bur. J. Blochem. 114, 465-470, 1981
A,Title: Comparison of the primary structure of the N-terminal CNBr fragments of human,
A,Reference number: S03735; MUID: 81212097; PMID:7238497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: S03737
A; Molecule type: protein
A; Molecule type: protein
A; Residues: 1-57 < BRUs
B; Marti, T.; Schaller, J.; Rickli, E.E.
Bur. J. Blochem. 149, 279-285, 1985
A; Title: Determination of the complete amino-acid sequence of porcine miniplasminogen.
A; Reference number: A25834; WUID:85203907; PMID:3846533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cispecies: Sus scrofa domestica (domestic pig)
CiDate: 07-Sep-1990 #sequence revision 01-Nov-1996 #text_change 18-Jul-1997
CiAccession: S03733; S03737; A25834
Rischaller, J.; Marti, T.; Roesselet, S.J.; Kaempfer, U.; Rickli, E.E.
Aritle: Amino acid sequence of the heavy chain of porcine plasmin. Comparison of A;Reference number: S03733
                           15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86 AHRSDALOLGEGKHNYCRNPDNRRRPWCYVQ-----VGLK----PLVQECMVHDCA 132
                                                                                                                                                                                                                                                                                                                   134 LGIGKGYRGKKATTVAGVPCQEWAAQEPHRHGIFTPETNPRAGLEKNYCRNPDGDVNGPW 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            310 EPSRA------DIALLKLSSP----AVITDEVIPACLPS----PNYVVADKTVCYITG 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            298 FGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSG 357
                                                                                                     20 KKLAGRSVEDCAAKCE-EEAQDCYHGNGQGYRGTSSTTVTGRKCQSWSSMIPHRHQKTPE
                                                                                                                                                                                                                                                                                                                                                                                                 194 CYTTNPRKLFDYCDIPQCESSFDCGKPKVEPKKCPARVVGGCVATPHSWPWQVSLRRRSR
                                                                       35 KKFGGQ------HCEIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATV--LQQTYH
                                                                                                                                                                                                                     79 SYPNAGLIM-----NYCRNPDADKSPWCYTTDPRVRWEFCNLKKAPQAPSVENPPEADCM
                                                                                                                                                                                                                                                                                                                                                                     --PPEELKFQCGQKTLRPR---FKIIGGEFTTIENQPWFAAIYRHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242 HKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQF----GISCEITG
                         125;
                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           412 GPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSTYVPWI
                         Mismatches 147;
  Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - pig (fragment)
                                                                                                                                                                                                                                                                       133 -----DGKKPSS------
                         51;
     30.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plasmin (EC 3.4.21.7) precursor N;Alternate names: plasminogen N;Contains: miniplasminogen
                         Conservative
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A;Molecule type: protein
A;Residues: 450-790 <MAR>
  Similarity
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                                                                                                                                                                                                                                                                                                                   -PPEELKF----QCGQ 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510 CSAPDVHGAAFTQGMLCAGFLEGGTDACQGDSGGPLVCEDETPERQLILRGIVSWGSGCG 569
                                                                                                                                                                    QVCRTNPCLNGDSCLQAE---GHRLCRCAPSFAGRLCDVDLKASCYDDRDRGLSYRGMAG 222
                                                                                                                                                                                                                     TDTMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPL 122
                                                                                                                                                                                                                                                                                                                                                              279 WNYCRLAPCQAAAGHEHFPLPSPSALQKPESTTQTPLPSLTSGWCSPTPLASGGPGGCGO 338
                                                                                                                                                                                                                                                                                                                                                                                                              ---KTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFI 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                         339 RLRKWLSSINRVVGGLVALPGAHPYIAALYWDQ-----HFCAGSLIAPCWVLTAAHCLQ 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIR-SKEG 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RCAQPSRTIQTICLPSMYNDPQFGTS -- CEITGFGKENSTDYLYPEQLKMTVVKLISHRE 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451 CCAHPSPFVÓPVCLPSTAARPAESEAAVCEVAGWGHQFEGGE-YSSFLQEAQVPLIDPQR 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COOPHYYGSEVITKMLCAADPOWKTDSCOGDSGGPLVC---SLOGRWILIGIVSWGRGCA 381
                                                                                                                  OVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYE--GNGHFYRGKAS 63
                                                                         Gaps
                                                                    90;
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                      Length 593;
                      ; Score 642; DB 2; Length 59; Pred. No. 7.9e-42; 60; Mismatches 167; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382 LKDKPGVYTRVSHFLPWIRSHT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.9%;
35.1%;
                                                  Best Local Similarity 35.1
Matches 155; Conservative
                                                                                                                                                                                                                                                                                                                   123 VQECMVHDC--ADG-
                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         393
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FEBS Lett. 213, 254-260, 1987
A,Title: Molecular cloning and characterization of a full-length cDNA clone for human ;
A,Reference number: A26646, MUID:87162490; PMID:3030813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: 184609
A;Status: translated from GB/EMBL/DDBJ
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 367-419 < MALI3>
A;Cross-references: GB:K02921; NID:g190110; PIDN:AAA60123.1; PID:g190111
A;Cross-references: GB:K02921; NID:g190110; PIDN:AAA60123.1; PID:g190111
Bir. J. Biochem: 114, 465-470; 1981
A;Fitle: Comparison of the primary structure of the N-terminal CNBr fragments of human A;Reference number: S03735; MUID:81212097; PMID:7238497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A:Title: Characterization of a complementary deoxyribonucleic acid coding for human and A:Reference number: 145961; MUID:85023311; PMID:6148961
A:Accession: 162738
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J. Biol. Chem. 257, 7401-7406, 1982
A;Title: Structure of the omega-aminocarboxylic acid-binding sites of human plasminoge A;Reference number: A92382, MUID:82213905, PMID:6919539
A;Contents: annotation; omega-aminocarboxylic acid binding sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Nolecule type: protein
A;Residues: 581-810 <W11>
R;Wiman, B.; Wallen, P.
Bur. J. Bicchem. 50, 489-494, 1975
A;Title: Structural relationship between "glutamic acid" and "lysine" forms of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,Molecule type: protein
A,Residues: 20-50,'Q',51-71,'E',73-85,87-100 <WI2>
R,Wiman, B.; Wallen, P.
A.T. J. Blochem. 58, 539-547, 1975
A,Title: Amino-acid sequence of the cyanogen-bromide fragment from human plasminogen
A,Reference number: A04626; MUID:76043692; PMID:126863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A. Rolecule type: protein
A. Rosidues: 483-507, E', 509-604 (WI3>
B. Robbins, K.C.; Bernabe, P.; Arzadon, L.; Summaria, L.
B. Robbins, K.C.; Bernabe, P. 1973
J. Fille: The primary structure of human plasminogen. II. The histidine loop of human A. Roference number: A92125, MUID:7149248; PMID:4694729
A. Contents: annotation; active site.
B. Groskopf, W.R.; Summaria, L.; Robbins, K.C.
J. Biol. Chem. 244, 3590-3597, 1969
A. Title: Studies on the active center of human plasmin. Partial amino acid sequence A. Rochents: annotation; active site.
A. Contents: A. Title: Destructive site.
A. Contents: A. Title: A. Title: Destructive site.
A. Contents: A. Title: A. Title: Destructive site.
A. Contents: A. Title: A. Title: A. Title: Destructive site.
A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A. Title: A.
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A;Molecule type: mRNA
A;Mesidues: 292-471, 'Y)', 473-810 <MAL2>
A;Cross_references: GB:K02922; NID:g190112; PIDN:AAA60124.1; PID:g387031
                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:X05199; NID:g35530; PIDN:CAA28831.1; PID:g35531 A;Experimental source: liver R;Malinowski, D.P.; Sadler, J.E.; Davie, E.W. Biochemistry 23, 4243-4250, 1984
                                                   R;Forsgren, M.; Raden, B.; Israelsson, M.; Larsson, K.; Heden, L.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 20-71,'E',73-85,87-106,'D',108-360,'E',362-810 <SOT>
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A, Residues: 20-71, E, 73-75 < SRU>
K, SOCITUP-Jensen, L.; Petersen, T.E.; Magnusson, submitted to the Atlas, July 1977
                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-471,'D',473-810 <FOR>
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Eur. J. Biochem. 76, 129-137, 1977
A;Title: Primary structure of the E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: A00929
                                                                                                                                                                                                                                      A:Accession: A26646
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NyAlternate names: plasminogen precursor [misnomer]
NyAlternate names: plasminogen precursor [misnomer]
NyContains: andjoistatin; microplasmin; plasminogen
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens
C;Accesion: 152242; A26646; 112738; 184609; 803735; A00929; A04627; A04625; A04
R;Petersen, T.E.; Martzen, M.R.; Ichinose, A.; Davie, E.W.
J. Biol. Chem. 265, 6104-6111, 1990
A;Title: Characterization of the gene for human plasminogen, a key proenzyme in the fibr
A;Reference number: A35229; MUID:90202879; PMID:2318848
A;Accession: A35229
A;Molecule type: DNA
A;Residues: 1-810 cPET>
A;Cross-references: GB:J05286; GB:M44276; NID:9190064; PIDN:AAA60113.1; PID:9387026
A;Experimental source: leukocyte; lung fibroblast
R;Malgaretti, N.; Bruno, L.; Pontoglio, M.; Candiani, G.; Meroni, G.; Ottolenghi, S.; Ta
A;Title: Definition of the transcription initiation site of human plasminogen gene in li
A;Reference number: 152242; MUID:9107523; PMID:2268308
F;1-77/Domain: activation peptide #status predicted <APT>
F;8-560/Product: plasmin chain A #status predicted <ACH>
F;84-162/Domain: kringle homology <KR1>
F;86-243/Domain: kringle homology <KR2>
F;356-333/Domain: kringle homology <KR3>
F;358-435/Domain: kringle homology <KR3>
F;358-435/Pomain: kringle homology <KR4>
F;460-790/Product: miniplasminogen #status experimental <MIN>
F;461-540/Domain: kringle homology <KR5>
F;61-790/Product: plasmin chain B #status experimental <BCH>
F;561-790/Promain: trypsin homology <KR5>
F;561-781/ADmain: plasmin chain B #status experimental <BCH>
F;561-781/ADmain: predicted status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  456 DLSEDCMFGNGKRYRGKRATTVAGVPCOEWAA-----OEPHRHSIFTPETNPRAGLEK-N 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     510 YCRNPDGDDNGPWCYT-TNPOKLFDYCDVPOCVTS-----SFDCGKPKVEPKKCP 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              157 FKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYI 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217 VYLGRSKLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQ 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     277 TICLPSMYNDPQF----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYG 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        663 PACLPT----PNYVVADRTACYITGWGETKGT--YGAGLLKEARLPVIENKVCNRYEYLG 716
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A;Residues: 1-16 <MAL1>
A;Cross-references: GB:M62890; NID:g190092; PIDN:AAA36454.1; PID:g553613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 21.9%; Score 504.5; DB 1; Length 790; Best Local Similarity 35.4%; Pred. No. 4.4e-31; Matches 130; Conservative 45; Mismatches 141; Indels 51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;602,645,740/Active site: His, Asp, Ser #status predicted
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Best Local Similarity 33.5'
Matches 139; Conservative
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A; Vail: C. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facility, D. Facili
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A; Contents: annotation; X-ray crystallography, 2.48 angstroms, residues 102-181
R; Padmanabhan, K.; Tulinsky, A.
A; Contents: annotation; X-ray crystallography, 2.25 angstroms, residues 377-454
A; Contents: annotation; X-ray crystallography, 2.25 angstroms, residues 377-454
A; Contents: annotation; X-ray crystallography, 2.25 angstroms, residues 377-454
B; Tulinsky, A.; Mathews, 1.1.
S; Danients: annotation; X-ray crystallography, 2.1 angstroms, residues 102-181
A; Reference number: A65244; DDB:1CEA
A; Contents: annotation; X-ray crystallography, 2.1 angstroms, residues 102-181
B; Tulinsky, A.; Mathews, 1.1.
S; DB:1CEB
A; Contents: annotation; X-ray crystallography, 2.1 angstroms, residues 102-181
B; Mulichak, A.M.; Tulinsky, A.; Ravichandran, K.G.
B; Contents: annotation; X-ray crystallography, 2.1 angstroms, residues 102-181
B; Mulichak, A.M.; Tulinsky, A.; Ravichandran, K.G.
B; Contents: annotation
A; Reference number: A58819; MUD:92031502; PMID:1657148
A; Contents: annotation
B; Contents: annotation
B; Contents: annotation
A; T. P.; Padmanabhan, K.; Tulinsky, A.; Mulichak, A.M.
B; Contents: annotation
B; Contents: annotation
A; Title: The refined structure of the epsilon-aminocaproic acid complex of human plasmin
A; Title: The refined structure of the epsilon-aminocaproic acid complex of human plasmin
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R;de Vos, A.M.; Ultsch, M.H.; Kelley, R.F.; Padmanabhan, K.; Tulinsky, A.; Westbrook, A;de Vos, A.M.; Ultsch, 1992
B;11cle: Crystal structure of the kringle 2 domain of tissue plasminogen activator at A;Reference number: A39483; MUID:92118803; PMID:1310033
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Stace, B.; Teeterer, M.M.; Whitlow, M.; Yamano, A.
Submitted to the Brookhaven Protein Data Bank, June 1995
A; Reference number: A65980; PDB:1RRN
A; Contents: annotation; X-ray crystallography, 1.67 angstroms, residues 376-454
B; Rejante, M.; Lilnas, M.
Submitted to the Brookhaven Protein Data Bank, August 1996
A; Reference number: A65803; PDB:1HPJ
A; Reference number: A65803; PDB:1HPJ
B; Rejante, M.; Lilnas, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Rejante, M.; Llinas, M.
submitted to the Brookhaven Protein Data Bank, August 1996
A;Reference number: A65804; PDB:1HPK
A;Contents: annotation; conformation by (1)H-NMR, residues 103-181
R;Rejante, M.R.; Lilnas, M.
Eur. J. Biochem. 221, 927-937, 1994
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A;Title: Solution structure of the epsilon-aminohexanoic acid complex of human plasminc A;Reference number: A58817; MUID:94237159; PMID:918181476
A;Contents: annotation; conformation by (1)HrMRR
A;Contents: annotation; conformation by (1)HrMRR
C;Comment: Plasminogen is synthesized by the Kidney and is present in plasma and many c C;Comment: Plasminogen is converted to plasmin by plasminogen activators (see PIR:UKHU C;Comment: Plasminogen is converted to plasmin by plasminogen activators (see PIR:UKHU C;Comment: Plasmin is inactivated by alpha-2-antiplasmin (see PIR:UKHU) immediately a rg-580, resulting in two chains connected by two disulfide bonds. Without the inhibitor C;Comment: Microplasmin is formed by autolytic cleavage of plasmin under artificial cor C;Comment: Stromelysin I (see PIR:KCHUSI) acts on plasminogen to produce angiostatin. I c;Genetics:
A;Genetics:
A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F----GISCEITGFGKENSIDYLYPEQLKMIVVKLISHRECQOPHYYGSEVITKMLCAAD 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57 FYRGKASTDIMGRPCLPWNSAIVLQQIYHAHR----SDALQLGLGKHNYCRNPD-NRRRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GYRGKRATTVTGTPCQDWAA-----QEPHRHSIFTPETNPRAGLEK-NYCRNPDGDVGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WCYT-TNPRKLYDYCDVPQCA---APS----FDCGKPQVEPKKCPGRVVGGCVAHPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWPWQVSL--RTRFG--MHFCGGTLISPEWVLTAAHCLEKSPRPSSYKVILGAHQEVNLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           647 PHVQEIEVSRLFLEPT-----RKDIALLKLSSP----AVITDKVIPACLPS----PN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345 PQWKTDSCQGDSGGPLVCSLQGRWTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAGGIDSCOGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSRFVTWI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;550-580,581-810/Product: microplasmin #status experimental <MMT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45; Mismatches 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 501; DB 1;
Pred. No. 8.3e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 25
B30848
plasmin (EC 3.4.21.7) precursor - rhesus macaque
C,Species: Macaca mulatta (rhesus macaque)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 NCDCLNGGTCVSNKYFSNIHWCNCPKKFGGO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;103-181/Domain: kringle homology «KR1»
F;185-262/Domain: kringle homology «KR2»
F;75-532/Domain: kringle homology «KR3»
F;377-454/Domain: kringle homology «KR3»
F;481-560/Domain: kringle homology «KR5»
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G:Function:
A;Description: dissolves the fibrin of blood clots; acts as a proteolytic factor in a v no the authors.
A;Description: dissolves the fibrin of blood clots; acts as a proteolytic factor in a v no the walls of the graafian follicle; also activates the urokinase-type plasminogen ac A;Pathway: fibrinolysis
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C;Superfamily: plasminogen-related protein precursor homology cPLPH>
F;1-9/Domain: plasminogen-related protein precursor homology cPLPH>
F;20-812/Pomain: plasminogen #status predicted cAPT>
F;20-96/Domain: activation peptide #status predicted cAPT>
F;20-96/Domain: crivation peptide #status predicted cAPT>
F;30-96/Domain: chain #status predicted cAST>
F;30-581/Domain: kringle homology cKR1>
F;30-581/Domain: kringle homology cKR2>
F;30-582/Domain: kringle homology cKR3>
F;30-7846/Domain: kringle homology cKR3>
F;30-7846/Domain: kringle homology cKR3>
F;30-7846/Domain: trypsin homology cKR3>
F;30-7881/Domain: trypsin homology cKR3>
F;80-812/Domain: trypsin homology cKR3>
F;80
                                                                                                A;Title: Characterization of the murine plasma fibrinolytic system.

A;Reference number: $48202; MUD:95010076; PMID:7523120

A;Recession: $48202

A;Molecule type: protein

A;Recidues: 20-25 <113>
A;Accession: $48203

A;Accession: $48203

A;Accession: $48203

A;Accession: $48203

A;Molecule type: protein

A;Residues: 22-27 <112>
C;Comment: Plasminogen is synthesized by the kidney and is present in plasma and many c
C;Comment: Plasminogen is converted into plasmin by plasminogen activators, both plasminediately after dissociation from the clot. In the presence of the inhibitor, the activation involves also removal of the activation peptide.
C;Comment: Stromelysin 1 (see PIR:KCMSS1) acts on plasminogen to produce angiostatin. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 428 NPDGDKGPWCYTTDPSVRWEYCNLKRCSETGGSVVELPTVSQEPSGPSDSETDCMYGNGK 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284 YNDPQF----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKM 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340 LCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bonds: #status predicted
F;78-79/Cleavage site: Glu-Asn (stromelysin 1) #status predicted
F;18-79/Cleavage site: Glu-Asn (stromelysin 1) #status predicted
F;46-467/Cleavage site: Thr-Val (stromelysin 1) #status predicted
F;581-582/Cleavage site: Arg-Val (plasminogen activator) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    488 DYRGKTAVTAAGTPCQGWAA-----QEPHRHSIFTPQTNPRADL-----EKNYCRNPDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DKSKTCYEGNGH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107 NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPBELKFQCGQKTLRPR---FKIIGGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537 DVNGPWCYT-INPRKLYDYCDIPLCASAS-----SFECGKPQVEPKKCPGRVVGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 FTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              587 VANPHSWPWQISLRTRFTG---OHFCGGTLIAPEWVLTAAHCLEKSSRPEFYKVILGAHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 LNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644 EYIRGLDVQEISVAKLILE-----PNNRDİÄLLKL----SRPATITDKVIPACLPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---PNYMVADRTICYITGWGETQGT---FGAGRLKEAQLPVIENKVCNRVEYLNNRVKSTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;624,667,762/Active site: His, Asp, Ser #status predicted
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                              R.Lijnen, H.R.; van Hoef, B.; Beelen, V.; Collen,
Eur. J. Biochem. 224, 863-871, 1994
A.Title: Characterization of the murine plasma fil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eful in treating solid tumors.
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Best Local S:
Matches 133,
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C;Date: 31-Mar-1989 #sequence_revision 31-Mar-1989 #text_change 22-Jun-1999
C;Accession: B32865; B30848
R;Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
J. Biol. Chem. 264, 5957-5965, 1989
A;Title: Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of synthesis.
A;Reference number: A32869; MUID:89174660; PMID:2925643
A;Accession: B32869
A;Accession: B32869
A;Accession: B32869
A;Actus: preliminary
A;Molecule type: mRNA
A;Residues: 1-810 < TOM>
A;Residues: 1-810 < TOM>
A;Residues: 1-810 < TOM>
A;Residues: 1-810 < TOM>
A;Residues: 1-810 < TOM>
A;Cross-references: GB:JO4697; NID:3342272; PIDN:AAA36901.1; PID:3342273
C;Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; serine protein precursor homology
C;Keywords: fibrinolysis: glycoprotein; hydrolase; kringle; serine proteinase
F;1-9/Domain: signal sequence #status predicted <SIG>
F;103-181/Domain: kringle homology <KR2>
F;185-262/Domain: kringle homology <KR2>
F;25-352/Domain: kringle homology <KR3>
F;21-54/Domain: kringle homology <KR3>
F;481-560/Domain: kringle homology <RR3>
F;481-560/Domain: trypsin homology <RR3>
F;481-803/Domain: trypsin homology <RR3>
F;49-73;53-61;103-181;124-164;152-176;185-262;188-316;206-245;234-257,275-352,296-335,32
B;052,665; #status predicted
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N;Contains: anglostatin; plasminogen
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 20-Sep-1991 #sequence revision 01-Nov-1996 #text_change 18-Jun-1999
C;Accession: A38514; S48202; $48203
R;Degen, S.-1F.; Bell, S.M.; Schaefer, L.A.; Elliott, R.W.
A;Reference Number: A38514; MUID:91184812; PMID:2081600
A;Title: Characterization of the cDNA coding for mouse plasminogen and localization A;Reference number: A38514; MUID:91184812; PMID:2081600
A;Molecule type: mRNA
A;Residues: 1-812 < DEG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR---FKIIGGEFTTIE 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NQPWFAAIYRRHRGGSVTYVVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ 288
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NPDADKGPWCFTTDPSVRWEYCNLKKCSGTEGSVAAPPPVAQLPDAETPSEEDCMFGNGK 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 NCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQ-------HCEIDKSKTCYEGNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488 GYRGKKATIVIGIPCOEWAA----OEPHSHRIFIPEINPRAGLEK-NYCRNPDGDVGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       591 SWPW--QISLRTRLG--MHFCGGTLISPEWVLTAAHCLEKSSRPSFYKVILGAHR----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;622,665,760/Active site: His, Asp, Ser #status predicted
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A;Title: Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of synthem A;Reference number: A32869; MUID:89174660; PMID:2925643
A;Reference number: A32869; MUID:89174660; PMID:2925643
A;Reference number: A32869; MUID:89174660; PMID:2925643
A;Residues: 1-1420
A;Molecule type: mRNA
A;Residues: 1-1420
C;Gyperfamily: apolipoprotein(a); kringle homology; trypsin homology
C;Keywords: hydrolase; kringle; homology «KR2>
F;50-127/Domain: kringle homology «KR2>
F;214-241/Domain: kringle homology «KR2>
F;224-465/Domain: kringle homology «KR2>
F;26-659/Domain: kringle homology «KR4>
F;26-659/Domain: kringle homology «KR5>
F;26-697/Domain: kringle homology «KR5>
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                                                                                                                                                                                                                                                                                                                                                               543 NGPWCYTMNPRKPF-DYCDVPQC------ESSFDCGKPKVEPKKCSGRIVGGCVS 590
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                        50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD-NR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         226 SNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYN 285
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C;Species: Macaca mulatta (rhesus macaque)
C;Atte: 22-Nov-1989 #sequence_revision 22-Nov-1989 #text_change 22-Jun-1999
C;Accession: A32869, A30848
R;Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
                                                                                    166 TIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            646 VREQSVQEIPVSRLFREPSQA-----DIALLKL----SRPAIITKEVIPACLPPPNY
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Best Local Similarity 35.1%,
Matches 133; Conservative
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A, Molecule type: protein
A, Molecule type: protein
A, Molecule type: protein
C, Function:
C, Function:
C, Function: dissolves the fibrin of blood clots; acts as a proteolytic factor in a variate walls of the gradian follicle; also activates the urokinase-type plasminogen act
A, Description: dissolves the fibrinolysis
C, Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C, Superfamily: plasminogen #status predicted & GIG
C, Superfamily: plasminogen #status predicted & GIG
C, Superfamily: plasminogen #status experimental & PRD
F; 27-812/Product: plasminogen #status experimental & APT
F; 104-583, 584-812/Product: plasmin #status experimental & APT
F; 104-583, 584-812/Product: plasmin #status experimental & APT
F; 104-188/Domain: kringle homology & KR2>
F; 282-359/Domain: kringle homology & KR3>
F; 282-359/Domain: kringle homology & KR3>
F; 284-861/Domain: kringle homology & KR5>
F; 584-805/Domain: krin
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A/Frestanders: Lail CaEA.

A/Frestanders: Lail CaEA.

A/Frestanders: Lail CaEA.

A/Frestanders: Lail CaEA.

A/Frestanders: Lail CaEA.

A/Fordaller, J.; Moser, PW.; Dannegger-Muller, G.A.K.; Rosselet, S.J.; Kampfer, U.; Rick Richaller, J.; Moser, PW.; Dannegger-Muller, G.A.K.; Rosselet, S.J.; Kampfer, U.; Rick Eur. J. Biochem. 149, 267-278, 1985

A/Fitie: Complete amino acid sequence of bovine plasminogen. Comparison with human plasm A/Feference number: A25835; MVID:85203966; PMID:3846532

A/Accession. A25835

A/Molecule type: protein

A/Feference number: A25835; MVID:85203966; PMID:3846532

A/Molecule type: D.; Sadler, J.E.; Davie, B.W.

Biochemistry 23, 4243-4250, 1984

A/Fitle: Characterization of a complementary deoxyribonucleic acid coding for human and A/Feference number: 145961; MVID:85023311; PMID:6148961

A/Accession: 145961

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                                                                                                                                                                                                                                                                                                                           Plasmin (EC 3.4.21.7) precursor - bovine
NyAlternate names: plasminogen
Cispecies: Bos primigenius taurus (cattle)
Cipate: 30-Sep-1987 #sequence revision 28-Apr-1995 #text_change 18-Jun-1999
CiAccession: S45046; A25835; I45961; S03736
RiBerglund, D.; Andersen, M.D.; Petersen, T.E.
submitted to the EMBL Data Library, May 1994
A;Description: Cloning and characterizatin of the bovine plasminogen cDNA.
A;Reference number: S45046
Gaps
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F:315/Binding site: carbohydrate (Ser) (covalent) #status experimental
F:365/Binding site: carbohydrate (Ser) (covalent) #status experimental
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34.9%; Pred. No. 1.6e-29;
ive 41; Mismatches 151;
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Best Local Similarity 34.9
Matches 124; Conservative
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A; Residues: 1-812 <BER>
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coding

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A,Cross-references: GDB:120699; OMIM:152200
A,Map position: 6q26-6q27
A,Note: several genes closely linked on chromosome 6 are identical in the first
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                                                                                                                                                                                                                 C;Superfamily: apolipoprotein(a); kringle homology; trypsin homology
C;Keywords: hydrolase; kringle; lipid binding; lipoprotein; serine proteinase
F;1-19/Domain: signal sequence #status predicted <SIG>.
F;20-4548/Product: apolipoprotein(a) #status experimental <MAT>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGK-----HNYCRN
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                      Cross-references: GB:M86878; NID:g178782; PIDN:AAA51749.1; PID:g553186; Genetics:
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                                                                                                                                                                                                                                                                                                                                                      142-219/Domain: kringle homology KR2>
'256-337/Oomain: kringle homology KR3+
'370-447/Domain: kringle homology KR4+
'484-561/Domain: kringle homology KR5-
'558-67/Oomain: kringle homology KR6-
'712-789/Domain: kringle homology KR6-
'826-903/Domain: kringle homology KR6-
'826-903/Domain: kringle homology KR7-
'826-903/Domain: kringle homology KR7-
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F;3562-3639/Domain:
F;3676-3753/Domain:
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A, A. Residues: 1-4548 (MCL)
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B, Residues: 1-4548 (MCL)
B, Residues: 1-4548 (MCL)
B, R. Batcn, D. L.; Fless, G. M.; Kohr, W.J.; McLean, J.W.; Xu, Q.T.; Miller, C.G.; Lawn, R.M.
Proc. Natl. Acad. Sci. U.S.A. 84, 3224-3228, 1987
A, Title: 19 Partial amino acid sequence of apolipoprotein(a) shows that it is homologous to A, Reference number: A28017; MUID:87204109; PMID:3472206
A, Accession: A28017
A, Mollocule type: protein
A, Residues: 20-21, P', 23-34, 177-179, 'N', 181-186, 'T', 188-196, 'DKG', 200;292-314, 'W', 316-31
X', 4396-4401 (EAT)
X', 4396-4401 (EAT)
B, C. Clarke, J.G.; Lindahl, G.E.; Liu, A.C.; Zysow, B.R.; Meer, K.; Schwartz, R. Proc. Natl. Acad. Sci. U.S.A. 90, 1369-1373, 1993
A, Title: 5' control regions of the apolipoprotein(a) gene and members of the related pla
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R;Malgaretti, N.; Acquati, F.; Magnaghi, P.; Bruno, L.; Pontoglio, M.; Rocchi, M.; Sacco
Proc. Natl. Acad. Sci. U.S.A. 89, 11584-11588, 1992
A;Title: Characterization by yeast artificial chromosome cloning of the linked apolipopa
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Affile: Multiple members of the plasminogen-apolipoprotein(a) gene family associated wi
A;Reference number: 152415; MUID:92207924; PMID:1554698
A;Accession: 152415
                                                                                                                                                                                                                                                                                                                                                                                                      apoprotein(a) (EC 3.4.21.-) precursor [validated] - human (A)Aleranate names: apolipoprotein(a); lipoprotein(a) chain apo(a) (C)Aleranate names: apolipoprotein(a); lipoprotein(a) chain apo(a) (C)Bate: 30-Jun-1989 #sequence revision 30-Jun-1989 #text change 08-Dec-2000 (C)Bate: 30-Jun-1989 #sequence revision 30-Jun-1989 #sequence revision 30-Jun-1989 #sequence RyMChean, Juw: Tomlinson, J.E.; Kuang, W.J.; Eaton, D.L.; Chen, E.Y.; Fless, G.M.; Scan Nature 330, 132-137, 1987
                            -SRPAIITDKVIPACLPS----PNYVITAWTECYITGWGETQGT--FGAGLLKEAQLHVI 1334
                                                                                                                                    A;Title: cDNA sequence of human apolipoprotein(a) is homologous to plasminogen.
A;Reference number: S00657; MUID:88039109; PMID:3670400
EGRCAQPSRTIQTICLPSMYNDPQF----GTSCEITGFGKENSTDYLYPEQLKMTVVKLI 320
                                                                                                           SHRECOOPHYYGSEVITKMLCAADPOWKIDSCOGDSGGPLVCSLOGRMILIGIVSWGRGC
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A;Status: preliminary; translation not shown; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
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A;Molecule type: DNA
A;Residues: 1-16 <RE5>
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R.Ichinose, A.
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A,Status: preliminary; translated from GB/EMBL/DDBJ
A,Molecule type: DNA
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A;Residues: 1-16 <RE3>
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
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312 LIMITVVKLISHRECOOPHYYGSEVTTXMLCAADPOWKTDSCOGDSGGPLVCSLOGRMTLT 371
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protein search, using sw model OM protein

3, 2003, 14:33:53 ; Search time 13.2061 Seconds (without alignments) 1463.563 Million cell updates/sec December Run on:

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2301 1 SNBLHQVPSNCDCLNGGTCV.....VSHFLPWIRSHTKBENGLAL 411 Title: Perfect score:

Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 segs, 47026705 residues

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Post-processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summaries

SwissProt\_41:\* Database :

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## SUMMARIES

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MEDLINE=8520353; PubMed=3888571;
Jacobs P., Cravador A., Loriau R., Brockly F., Colau B., Chuchana P.,
van Elsen A., Herzog A., Bollen A.;
"Molecular cloning, sequencing, and expression in Escherichia coli of
human preprourokinase CDNA.";
DNA 4:139-146(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Holmes W.E., Pennica D., Blaber M., Rey M.W., Guenzler W.A., Steffens G.J., Heyneker H.L., "Cloning and expression of the gene for pro-urokinase in Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=85215647; PubMed=2987867;
Riccio A., Grimaldi G., Verde P., Sebastio G., Boast S., Blasi F.;
"The human urokinase-plasminogen activator gene and its promoter.";
Nucleic Acids Res. 13:2759-2771(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Lung;
MEDLINE-22388257; PubMed=12477932;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
                                      UROK_HUMAN STANDARD; PRT; 431 AA.
P00749; Q15844; Q16618; Q969M6;
21-UTL-1986 (Rel. 01, created)
20-WAR-1987 (Rel. 04, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Nickerson D.A.; Submitted (JUN-2001) to the BMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=86056954; PubMed=2415429;
Magai M., Hiramatsu R., Kaneda T., Hayasuke N., Arimura H.,
Nishida M., Suyama T.;
"Molecular cloning of CDNA coding for human preprourokinase.";
Gene 36:183-188(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biotechnology 3:923-929(1985).
                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
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A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
A Brownstein M.J. Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Rahha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
A Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,
A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
A Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length
Thuman and mouse cDNA sequences.",
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=20266327; PubMed=10805774;
Sperl S., Jacob U., Arroyo de Prada N., Sturzebecher J., Wilhelm O.G.,
Bode W., Magdolen V., Huber R., Moroder L.;
"(4-aminomethyl) phenylguanidine derivatives as nonpeptidic highly
selective inhibitors of human urokinase.";
Proc. Natl. Acad. Sci. U.S.A. 97:5113-5118(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Human low-molecular-weight urinary urokinase. Partial characterization and preliminary sequence data of the two polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIINE=89127526; PubMed=2536903;
Oswald R.E., Bogusky M.J., Bamberger M., Smith R.A.G., Dobson C.M.;
"Dynamics of the multidomain fibrinolytic protein urokinase from two-
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 66-431 FROM N.A.
MEDILINE=84572706, PubMed=6589620;
Verde P., Stoppelli M.P., Galeffi P., di Nocera P., Blasi F.;
"Identification and primary sequence of an unspliced human urokinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "The primary structure of high molecular mass urokinase from human urine. The complete amino acid sequence of the A chain."; Hoppe-Seyler's Z. Physiol. Chem. 363:1155-1165(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 158-410.
MEDLINE=83055099; PubMed=6754572;
Steffens G.J., Gunzler W.A., Otting F., Frankus E., Flohe L.;
The complete amino acid sequence of low molecular mass urokinase from human urine.";
Hoppe-Seyler's Z. Physiol. Chem. 363:1043-1058(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X.-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
MEDLINE=96000858; PubMed=8591045;
Spraggon G., Phillips C., Nowak U.K., Ponting C.P., Saunders D., Dobson C.M., Stuart D.I., Jones E.Y.;
"The crystal structure of the catalytic domain of human urokinase-type plasminogen activator.";
Structure 3:681-691(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 21-177.
MEDLINE=83055084; PubMed=6754569;
Gunzler W.A., Steffens G.J., Otting F., Kim S.-M.A., Frankus E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 156-176 AND 179-224.
MEDLINE=83003608; PubMed=6749491;
SChaller J., Nick H., Rickli E.E., Gillessen D., Lergier W., Studer R.O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (1.8 ANGSTROMS) OF 159-411.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. 81:4727-4731(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eur. J. Biochem. 125:251-257(1982)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRUCTURE BY NMR OF 67-155.
MEDLINE=93003110; PubMed=1327118;
Li X., Smith R.A.G., Dobson C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 337:579-582(1989).
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Turkmen B., Schmitt M., Schmalfeldt B., Trommler P., Hell W.,
Turkmen B., Schmitt M., Schmalfeldt B., Trommler P., Hell W.,
Turkmen B., Schmitt M., Schmalfeldt B., Trommler P., Hell W.,
Turkmen B., Schmitt M., Schmalfeldt B., Trommler P., Hell W.,
The Courtain analysis of the genes encoding urokinase-type plasminogen
activator (uPA) and its inhibitor PAI-1 in advanced ovarian cancer.";
Electrophoresis Is 8:686-6891(1997).
THERAPY OF THROMBOLYTIC DISORDERS.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
plasminogen to form plasmin.
-!- GATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
plasminogen to form plasmin.
-!- SUBUNIT: FOUND IN HIGH AND LOW MOLECULAR MASS FORM CONTAINS A
LONG CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A
LONG CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM TO YIELD A SHORT A1 CHAIN.
-!- PHARMACEUTICAL: Available under the name Abbokinase (Abbott). Used
IN PULIDARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains I kringle domain.
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"Sequential 1H NMR assignments and secondary structure of the kringle domain from urokinase."; Blochemistry 31:9562-9571(1992).
                                                                                                                                                                                                                                                                                                                                                                                  VARIANT LEU-141.
MEDLINE=96186279; PubMed=8652631;
Yoshimoto M., Ushiyama Y., Sakai M., Tamaki S., Hara H., Takahashi K.,
Sawasaki Y., Hanada K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=97218551; PubMed=9065988;
Conne B., Berczy M., Belin D.;
"Detection of polymorphisms in the human urokinase-type plasminogen
                                                                                                                                   MEDLINE=94149701; PubMed=8107091; Li X., Bokman A.M., Llinas M., Smith R.A.G., Dobson C.M.; Li X., Bokman A.M., Llinas M., Smith R.A.G., Dobson C.M.; "Solution structure of the kringle domain from urokinase-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Characterization of single chain urokinase-type plasminogen activator with a novel amino-acid substitution in the kringle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochim. Biophys. Acta 1293:83-89(1996).
                                                                                                                                                                                                                                                                           plasminogen activator.";
J. Mol. Biol. 235:1548-1559(1994).
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Thromb, Haemost. 78:973-973(1997).
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Thromb. Haemost. 77:434-435(1997)
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EMBL; M15476; AAA61253.1; -...
EMBL; D00244; BAA01015.1; -...
EMBL; D11143; BAA01919.1; -...
EMBL; X02760; CAA26535.1; -...
EMBL; AF377330; AAK53822.1; -...
EMBL; AF377330; AAK53822.1; -...
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InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 1.
Pfam; PF00089; trypsin; 1.
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SWART; SW00181; EGF: 1.
SWART; SW00120; KR; 1.
SWART; SW00020; Tryp, SP: 1.
PROSITE; PS00022; EGF_1; 1.
PROSITE; PS00021; KRINGLE 1; 1.
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                                                                                               InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro: Trace.
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Best Local Similarity 92.5%
Matches 383; Conservative
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WEROPS; S01.231;
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X MEDLINE=90287734; PubMed=2113276;

X MEDLINE=90287734; PubMed=2113276;

X MEDLINE=90287734; PubMed=2113276;

X MEDLINE=90287734; PubMed=2113276;

X MEDLINE=90287734; PubMed=2113276;

X Moule and deduced amino acid sequences of baboon urokinase-type plasminogen activator:";

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X Nucleotide and deduced amino acid sequences of baboon urokinase-type in plasminogen correction:

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                                                                                                                                                             KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                  KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKENYCRNPDNRRRPWCYVQVGLK 140
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                                                     Gaps
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01-APR-1990 (Rel. 14, Last sequence update)
01-BFR-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (upA)
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Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Papio.
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                 Length 431;
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               Score 2298; DB 1;
Pred. No. 1.7e-174;
1; Mismatches 0;
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               99.9%;
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PLAU.
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                                                                                                                         379
357
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Nagamine Y., Pearson D., Altus M.S., Reich B.;
"CDNA and gene nucleotide sequence of porcine plasminogen activator.";
Nucleic Acids Res. 12:9525-9541(1984).
                                                                                                     FGKENSTDYLYPEQLIONTVVKLVSHQKCQQPHYYGSEVTTKMLCAADPQWETDSCQGDSG
                                                                          FGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSG
                                                                                                                                                                                               380 GPLVCSIQGHMTLTGIVSWGRGCALKDKPGVYTRVSRFLPWIHSHTREQNGLAL 433
                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-1987 (Rel. 04, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
28-EEB-2003 (Rel. 41, Last annotation update)
Unckinase-type plasminogen activator precursor (EC 3.4.21.73) (upA)
PLAU.
                                                                                                                                                                   GPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (DEC-1986) to the PIR data bank.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond plasminogen to form plasmin.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                       442 AA
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InterPro; IPR006209; EGF_like.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; Kringle; 1.
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PRINTS; PRO0121; KRINGLE.
PRO0135; KRINGLE.
SWART; SM00120; KR; 1.
SWART; SM00120; TRYP_SPC; 1.
PROSITE; PS00122; EGF_1; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS00021; KRINGLE 2; 1.
PROSITE; PS00014; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
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HASSP, P00749; IKDU.
MEROPS; S01.231; -.
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Nagamine Y.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              261 GEMKFEVEKLILHEDYSADSLAHHNDIALLKIRTDKGQCAQPSRSIQTICLPPVNGDAHF
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             Plasminogen activation; Hydrolase; Serine protease; Glycoprotein; Kingle; EGF-11ke domain; Zymogen.; Signal.
SIGNAL 20 BY SIMILARITY.
CHAIN 21 442 UROKINASE-TYPE PLASMINOGEN ACTIVATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1859.5; DB 1; Length 442; Pred. No. 8.3e-140; Indels 11;
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Q -> H (IN REF. 1; CAA25511).
A -> GS (IN REF. 1; CAA25806)
EE32PCEF501321EE CRC64;
                                                                                                                                  CONNECTING PEPTIDE.
SERINE PROTEASE.
N'LINKED (GLCNAC. . .).
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
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CHAIN B (BY SIMILARITY)
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Last sequence update)
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                                                                                                        EGF-LIKE.
KRINGLE.
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PROSITE; PS00135; TRYPSIN SER; 1.
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Matches 334; Conservative
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005589, Q28209,

01-FEB-1994 (Rel. 28, Cl.

01-FEB-1994 (Rel. 28, L.

28-FEB-2003 (Rel. 41, L.
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TISSUE=Kidney;
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                                                                                                                                                                                                                                                                                                         TISSUB=Kidney;
Ravn P., Berglund L., Petersen T.E.;
"Cloning and characterization of the bovine plasminogen activators uPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA) (U-plasminogen activator).
                                       Bos taurus (Bovine).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
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                                                                                                                                                                                                                                                                                                                                                                        Scileuning W.-D.; "Bovine urckinase-type plasminogen activator and its receptor: cloning and induction by retinoic acid."; Gene 125:177-183(1993).
                                                                                                                                                                              MEDLINE=93216119; PubMed=8385052;
Kraetzschmar J., Haendler B., Kojima S., Rifkin D.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN A (BY SIMILARITY)
CHAIN B (BY SIMILARITY)
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CONNECTING PEPTIDE.
SERINE PROTEASE.
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EMBL; X85801; CAA59796.1; -.
PIR; JNO560; JNO560.
HSSP; PO0749; 1LMW.
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SEQUENCE OF 12-433 FROM N.A.
                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Aortic endothelium;
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81 RGKANRDLSGRPCLAWDSPTVLLKMYHAHRSDAIQLGLGKGKHNYCRNPDNQRRPWCYVQIG 140
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261 LILHEDYSAESLAHHNDIALLKIRTSRGQCAQPSRSIQTICLPPPHEDAHSRTRCEIIGF
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA) (U-plasminogen activator).
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(BY SIMILARITY).
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MEDLINE=92233409; PubMed=1568219;
Henderson B.R., Tansey W.P., Phillips S.M., Ramshaw I.A.,
                                                                                                                                                                                                                                                                                                                                             76.8%; Score 1767; DB 1; Length 4 75.1%; Pred. No. 1.7e-132; tive 45; Mismatches 56; Indels
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4DE1B8D4DA47027A CRC64;
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       378
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433 AA;
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Best Local Similarity
Matches 310; Conserva
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                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                         plasminogen to form plasmin.
SUBUNIT: FOUND IN HIGH AND LOW MOLECULAR MASS FORMS. BACH
CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM
CONTAINS A LONG CHAIN. A. CLEAVAGE OCCURS AFTER RESIDUE 156 IN THE
LOW MOLECULAR MASS FORM TO YIELD A SHORT AI CHAIN (BY SIMILARITY).
SIMILARITY: BELOWORS TO PEPTIPASE FAMILY SI.
SIMILARITY: Contains I Kringle domain.
                                                                                                                                                                                                                                                                                         ACTIVATOR
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SHORT A CHAIN (A1) (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
Rabbani S.A.;
Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERCHAIN (BY SIMILARITY).
BY SIMILARITY.
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CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
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E -> G (IN REF. 2)
D -> N (IN REF. 2)
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BY SIMILARITY.
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InterPro; IPR006209; EGF like.
InterPro; IPR006010; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001224; Ser protease_Try.
Pfam; PF00051; Kringle; I.
Pfam; PF00089; trypsin; I.
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EMBL; X65651; CAA46601.1; -.
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PIR, S24604; S18932.
HSSP; P00749; IKDU.
MEROPS; S01.231; -.
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432 AA;
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MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163489; PubMed=2831940;
MEDLINE-88163717; Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
MEDLINE-88163489; Polyn IN HIGH AND LOW MOLECULAR MASS FORM CONTAINS A CONTAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A CONTAINS A SHORT AL CHAIN M. A CLEAVAGE OCCURS A SHORT AL CHAIN (BY SIMILARITY).

CONTAIN MASS FORM TO YIELD A SHORT AL CHAIN (BY SIMILARITY).

CONTAIN MASS FORM TO YIELD A SHORT AL CHAIN (BY SIMILARITY).

CONTAINS TO REFINE ELONGS TO REPTIDASE FAMILY SI.

CONTAINS TO REFINE SELONGS TO REPTIDASE FAMILY SI.
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                                                                                                                                                                                                                          SNCGCQNGGVCVSYKYFSSIRRCSCPKKFKGEHCEIDTSKTCYHGNGQSYRGKANTDTKG
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01-JAN-1988 (Rel. 06, Last sequence update)
01-JAN-1988 (Rel. 06, Last sequence update)
Unokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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MEDLINES 1700, 17.7.

MEDLINES 1700, 17.7.

MEDLINES 1700, Vassalli J.-D., Combepine C., Godeau F., Nagamine Y.,

Reich E., Kocher H.P., Duvoisin R.M.;

"Cloning, nucleotide sequencing and expression of cDNAs encoding mouse urokinase-type plasminogen activator.";

Eur. J. Biochem. 148:225-232(1985).
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    DB 1; Length 432;
                                                                                         Indels
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                                                                                         90;
                                                 Pred. No. 1.9e-126;
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73.5%; Score 1690.5; 73.2%; Pred. No. 1.9e
                                                                                    47; Mismatches
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295; Conserv
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                                                 Best Local
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188 VCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSA 247
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HSSP; P00763; 1DPO.
MEROPS; S01.231; -.
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the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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R PRINTS; PRO0122; CHYMOTRYPEIN.

R PROD018; KRINGLE.

R SMART; SM00181; EGF.

R SMART; SM00180; KR; 1.

SMART; SM00120; EGF.

R PROSITE; PS00022; EGF.

R PROSITE; PS00021; KRINGLE.

R PROSITE; PS00014; KRINGLE.

R PROSITE; PS00014; TRYPSIN DM: 1.

R PROSITE; PS00134; TRYPSIN DM: 1.

R PROSITE; PS00134; TRYPSIN LIS; FALSE NEG.

R PROSITE; PS00134; TRYPSIN JER; 1.

R PROSITE; PS00135; TRYPSIN JER; 1.

R PROSITE; PS00135; TRYPSIN JER; 1.

R PROSITE; PS00135; TRYPSIN JER; 1.

R PROSITE; PS00135; TRYPSIN JER; 1.

R PROSITE; PS00135; TRYPSIN JER; 1.

R PSIGNAL

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CHAIN A (BY SIMILARITY).
SHORT A CHAIN (A1).
CHAIN B (BY SIMILARITY).
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; Pred. No. 4.4e-124;
52; Mismatches 63;
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CONNECTING PEPTIDE.
                                                                  EMBL; X02389; CAA26231.1; --
EMBL; M17922; AAA40539.1; --
FRF, A29420; UKMS.
FIR; A29420; UKMS.
FIRSP; P00749; IKDU.
MEROPS; S01.231; --
MGD; MGI:97611; Plau.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006210; IEGF.
InterPro; IPR001204; Kringle.
InterPro; IPR001204; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
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210 KCGGSLISPCWVASAAHCFIQLPKKENYVVYLGQSKESSYNPGEMKFEVEQLILHEYYRE 269
                                                                              367
                                                                                                                                                          330 YPKNLKMSVVKLVSHEQCMQPHYYGSEINYKMLCAADPEWKTDSCKGDSGGPLICNIEGR 389
                                                                                                                                                                                                                                                                                                                                                                      P15120;
01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
(Jallus gallus (Chicken).
Enkaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi:
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                     DTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYL
                                                                                                                                   308 YPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=90110185; PubMed=2295632;
MEDLINE=90110185; PubMed=2295632;
Lessle N.D., Kessler C.A., Bell S.M., Degen J.L.;
The chicken urckinase-type plasminogen activator gene.";
J. Biol. Chem. 265:1339-1344 (1990).
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 BGF-like domain.
                                                                                                                                                                                                                                        390 PTLSGIVSWGRGCAEKNKPGVYTRVSHFLDWIQSHIGEEKGLA 432
                                                                                                                                                                                                               368 MTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLA 410
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InterPro; IPR006209; EGF like.
InterPro; IPR006209; EGF like.
InterPro; IPR000010; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00081; Kringle, 1.
Pfam; PF00081; Kringle, 1.
PRINTS; PR00122; CHYMOTRYPSIN.
PRINTS; PR00108; KRINGLE.
ProDom; PD000395; KRINGLE.
ProDom; PD000395; KRINGLE.
SMART; SM00181; RR; 1.
SMART; SM00181; RR; 1.
SMART; SM00181; RR; 1.
PROSITE; PS00022; EGF 1; 1.
PROSITE; PS01021; KRINGLE 1; 1.
PROSITE; PS01021; KRINGLE 1; 1.
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                                                                                                                                                                                                                                                                                                                                                                                130 DCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVC 189
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                                                                                                                                                                                                                                                                                                        11 CDCLNGGTCVSNKYPSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRP 70
                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                                                                                                                                                        CQCLNGGTCITYRFFSQIXRCLCPEGYGGLHCEIDINSICYSGNGEDYRGMAEDP----G
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01-FBE-1996 (Rel. 33, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
28-FBB-2003 (Rel. 41, Last annotation update)
31/usary plasminogen activator alpha 2 precursor (EC 3.4.21.68) (DSPA alpha-2) (BAT-PA) (T-plasminogen activator).
Desmodus rotundus (Vampire bat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Chiroptera; Microchiroptera; Phyllostomidae;
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                    INTERCHAIN (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
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CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
N-LINKED (GLCNAC. ...) (POTENTIAL).
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein; Kringle; EGF-like domain; Signal; Zymogen.
20
POTENTIAL.
                                                           UROKINASE-TYPE PLASMINOGEN ACTIVATOR CHAIN A (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                    43.6%; Score 1004; DB 1; Length 434; 47.4%; Pred. No. 3.7e-72;
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64; Mismatches 123; Indels
                                                                                                                                                                                                                                                 BD881048DD666A55 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GRMTLYGIVSWGDGCAKKOKFGVYTRVTRYLNWIDSN 419
                                                                                                        CONNECTING PEPTIDE.
SERINE PROTEASE.
BY SIMILARITY.
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BY SIMILARITY.
                                                                                                KRINGLE
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434 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!-SUBUNTY: MONDMER.
-!- SUBUNTY: MONDMER.
-!- DOMAIN: THE FIBRONECTIN TYPE-I DOMAIN MEDIATES BINDING TO FIBRIN,
AND THE KRINGLE DOMAIN APPARENTLY MEDIATES FIBRIN-INDUCED
STIMULARION OF ACTIVITY.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 EGF-like domain.
-!- SIMILARITY: Contains 1 fibronectin type I domain.
-!- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 6671395-403 (1992).
-1- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FEEDING HABITS OF THI EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

ENZYME REGULATION: ACTIVITY TOWARD PLASMINOGEN IS STIMULATED IN THE PRESENCE OF FIBRIN I.
                                                                                                                                      TISSUE-Salivary gland;
MEDLINE=92039036; PubMed=1937019;
Kretzschmar J., Haendler B., Langer G., Boidol W., Bringmann P.,
Alagon A., Donner P., Schleuning W.D.;
"The plasminogen activator family from the salivary gland of the
vampire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
TISSUE=salivary gland;
MEDLINE=90036667; Pubmed=2509450;
Gardell S.J., Duong L.T., Diehl R.E., York J.D., Hare T.R.,
Register R.B., Jacobs J.W., Dixon R.A.F., Friedman P.A.;
"Isolation, characterization, and cDNA cloning of a vampire bat salivary plasminogen activator.";
J. Biol. Chem. 264:17947-17952(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHARACTERIZATION.
MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006210; EGF librachi.
InterPro; IPR006210; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
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PRINTS; PRO0018; KRINGLE.
PRODON; PDO00018; KRINGLE; 1.
SMART; SMO00181; EGF; 1.
SMART; SMO0058; FN1; 1.
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EMBL; JO5082; AAA31596.1; -.
PIR; JS0599; JS0598.
HSSP; P98119; 1A51.
MEROPS; S01.232; -.
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Pfam; PF00051; kringle; 1.
Pfam; PF00089; trypsin; 1.
Desmodontinae, Desmodus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     296 TGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKT----- 349
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              197 SKFILEFCSVPVCS------KATCGLRKYKEPQLHSTGGLFTDITSHPWQAAIF 244
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      245 AQNRRSSGERFLCGGILISSCWVLTAAHCFQERYPPQHLRVV-LGRTYRVKPGKEEQTFE 303
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CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
  SMART; SMO020; TYP, SPC; 1.

PROSITE; PS00020; TYP, SPC; 1.

PROSITE; PS01186; EGF 2; 1.

PROSITE; PS01186; EGF 2; 1.

PROSITE; PS01021; KRINGLE_1; 1.

PROSITE; PS02040; TRYESIN_DOM; 1.

PROSITE; PS00135; TRYESIN_DOM; 1.

PROSITE; PS00135; TRYESIN_DOM; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.

PROSITE; PS00135; TRYESIN_STR; 1.
                                                                                                                                                                                                                                                                                                     SALIVARY PLASMINOGEN ACTIVATOR ALPHA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37.6%; Score 864.5; DB 1; Length 477; 42.9%; Pred. No. 4.4e-61;
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                                                                                                                                                                                                                                                                                                                              FIBRONECTIN TYPE-I
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SMART; SM00130; KR; 1.
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Reddy V.B., Garramone A.J., Sasak H., Wei C.-M., Watkins P., Galli J.,
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MEDLINE=90192129; PubMed=2107528;
MEDLINE=90192129; PubMed=2107528;
Siebert P.D., Pong K.;
"Variant tissue-type plasminogen activator (PLAT) cDNA obtained from human endothelial cells.";
Nucleic Acids Res. 18:1086-1086(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=8428137; PubMed=6089198;
MEDLINE=84281817; Lund B.;
"T. Elgh F., Lund B.;
"The structure of the human tissue-type plasminogen activator gene: correlation of intron and exon structures to functional and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-86284200; PubMed=3090401; Harris T.J., Patel T., Marston F.A., Little S., Emtage J.S., Obdenaker G., Volckaert G., Rombauts W., Billiau A., Somer P.; "Cloning of cDNA coding for human tissue-type plasminogen activator and its expression in Escherichia coli."; and its expression in Escherichia coli."; Mol. Biol. Med. 3:279-292(1986).
                                                                                                                                                                                                                                                                                                   MEDLINE-83115262; PubMed=6337343; Pennica D., Holmes W.E., Kohr W.J., Harkins R.N., Vehar G.A., Pennica D., Holmes W.E., Kohr W.J., Harkins R.N., Vehar G.A., Bannett W.F., Yelverton E., Seeburg P.H., Heyneker H.L., Goeddel D.V., Collen D.; Collen D.; "Cloning and expression of human tissue-type plasminogen activator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUB=Fetal lung;
MEDLINE=88262879; PubMed=3133640;
Sasaki H., Saito Y., Hayashi M., Otsuka K., Niwa M.;
Sunclectide sequency the tissue-type plasminogen activator CDNA from human fetal lung cells.";
Nucleic Acids Res. 16:5695-5695 (1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Expression of human uterine tissue-type plasminogen activator in mouse cells using BPV vectors.";
                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                21-JUL-1966 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-pA) (t-plasminogen activator) (Alteplase) (Reteplase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          structural domains.";
Proc. Natl. Acad. Sci. U.S.A. 81:5355-5359(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-86196143; PubMed=3009482;
Frieznar Degen S.J., Rajput B., Reich E.;
Frie human Lissue plasminogen activator gene.";
The human 261:6972-6985(1986).
                                  562 AA
                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE=88054470; PubMed=2824147;
                                                                                                                                                                                                                                                                                                                                                                                              cDNA in E. coli.";
Nature 301:214-221(1983).
                                  STANDARD;
                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA 6:461-472(1987).
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                                  TPA HUMAN 1900750; Q15103;
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                                   Astraubberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Altachine F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altachul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Blata N.K.,

Hopkins R.F., Jordan H., Moore T., Mang J., Hsiah F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Botachenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Willalon D.K., Muzry D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N. Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield Y.S.N. Krzywinski M.I., Skalska U., Smailus D.E.,

"Mensy R. Schein J.E., Jones S.J. Myarra M.A.;

"Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=85000468; PubMed=6433976;
Pohl G., Kaellstroem M., Bergsdorf N., Wallen P., Joernvall H.;
"Tissue plasminogen activator: peptide analyses confirm an indirectly
derived amino acid sequence, identify the active site serine residue,
establish glycosylation sites, and localize variant differences.";
Biochemistry 23:3701-3707(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itagaki Y., Yasuda H., Morinaga T., Mitsuda S., Higashio K.; "Purification and characterization of tissue plasminogen activator secreted by human embryonic lung diploid fibroblasts, IMR-90 cells."; Agric. Biol. Chem. 55:1226-1212(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schleuning W -D., "Isolation of the human tissue-type plasminogen activator structural gene including its 5' flanking region."; J. Biol. Chem. 260:11223-11230(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=81209620; PubMed=6682760;
Wallen P., Pohl G., Bergsdorf N., Raanby M., Ny T., Joernvall H.;
"Purification and characterization of a melanoma cell plasminogen
                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-83169656; PubMed-6572897;
Edlund T., Ny T., Raanby M., Heden L.-O., Palm G., Holmgren E.,
Josephson S.;
                                                                                                                                                                                                                                                                                                                                                                                                                  "Isolation of cDNA sequences coding for a part of human tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=90092112; PubMed=2513186;
Pfeilfer G., Schmidt M., Strube K.-H., Geyer R.;
"Carbohydrate structure of recombinant human uterine tissue
plasminogen activator expressed in mouse epithelial cells.";
Eur. J. Biochem. 186:273-286(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-36 FROM N.A.
MEDLINE-85289338; PubMed=3161893;
Fisher R., Waller E.K., Grossi G., Thompson D., Tizard R.,
                                                                                                                                                                                                                                                                                                          human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                plasminogen activator.";
Proc. Natl. Acad. Sci. U.S.A. 80:349-352(1983)
                            MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. Biochem. 132:681-686(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 31-562 FROM N.A.
MEDLINE=91291340; Pubmed=1368681;
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MEDLINE=91159408; PubMed=1900431;
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Byeon I.-J.L., Kelley R.F., Llinas M.;
"IH NMR structural characterization of a recombinant kringle 2 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97449126; PubMed=9305622;
Renatus M., Engh R.A., Stubbs M.T., Huber R., Fischer S., Kohnert U.,
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Byeon I.-J.L., Llinas M.;
"Solution structure of the tissue-type plasminogen activator kringle
2 domain complexed to 6-aminohexanoic acid an antifibrinolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bode W.; "The 2.3 A crystal structure of the catalytic domain of recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Lysine 156 promotes the anomalous proenzyme activity of tPA: X-ray
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MEDDIANE-29118803; PubMed=1310033;
de Vos A., Ulsch M.H., Kelley R.F., Padmanabhan K., Tulinskly A.,
Westbrook M.L., Kossiakof A.A.;
Westbrook M.L., Kossiakof A.A.;
TCypstal structure of the kringle 2 domain of tissue plasminogen
activator at 2.4-A resolution.";
Biochemistry 31:270-279(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Byeon I.-J.L., Kelley R.F., Llinas M.;
Kringle-Z domain of the tissue-type plasminogen activator. 1H-NMR
assignments and secondary structure.";
Eur. J. Biochem. 197:155-165(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=96200985; PubMed=8613982;
Lamba D., Bauer M., Huber R., Fischer S., Rudolph R., Kohnert U.,
                                                                                                                                                                                                                                        Vlahos C.J., Wilhelm O.G., Hassell T., Jaskunas S.R., Bang N.U.; "Disulfide pairring of the recombinant kringle-2 domain of tissue plasminogen activator produced in Escherichia coli."; J. Biol. Chem. 266:10070-10072(1991).
Harris R.J., Leonard C.K., Guzzetta A.W., Spellman M.W.;
"Tissue plasminogen activator has an O-linked fucose attached
threonine-61 in the epidermal growth factor domain.";
Biochemistry 30:2311-2314(1991).
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MEDLINE=97449126; PubMed=9305622;
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J. Mol. Biol. 258:117-135(1996).
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Biochemistry 28:9350-9360(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     crystal structure of single-chain human tPA.";
EMBO J. 16:4797-4805(1997).
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J. Mol. Biol. 222:1035-1051(1991).
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MEDLINE=92106329; Pubmed=1762144;
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                                                                                                                                                 376 YRVVPGEEEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSVVRTVCLPP 433
                                                                                                                                                                                                 434 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCA 493
GKYSSEPCSTPACSEGNSDCYPGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPS 255
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                                          FTTIENQPWFAAIYRH-RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRS
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                           -------FQCG-QKTLRPRFKIIGGE
                                                                                                                               223 RINSNIQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRIIQTICLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Plasminogen activators from the saliva of Desmodus rotundus (common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vampire bat): unique fibrin specificity.",
Ann. N.Y. Acad. Sci. 667:395-403(1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FREDING HABITS OF TR
EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1996 (Rel. 33, Created)
U-FBB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Saliyary plasminogen activator beta precursor (EC 3.4.21.68) (DSPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desmodus rotundus (Vampire bat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Salivary gland;
MEDLINE-92039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P.,
Alagon A., Donner P., Schleuning W.D.;
"The plasminogen activator family from the salivary gland of the
vampire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- SUBUNIT: Monomer.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Petri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=933933659; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri '
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                             ----SPPEELK-
                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
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CHARACTERIZATION.
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RR PRODOM; PRO0722; CHYMOTRYPSIN.

RR PRODOM; PRO0729; KRINGLE.

RR PRODOM; PRO0739; KRINGLE.

RR SMART; SM00181; EGF; 1.

SMART; SM00130; KR; 1.

SMART; SM00130; KR; 1.

RR PROSITE; PS01021; EGF; 1.

RR PROSITE; PS01021; KRINGLE 1; 1.

RR PROSITE; PS01034; TRYPSIN LE; 1.

RR PROSITE; PS0134; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.

RR PROSITE; PS0135; TRYPSIN LE; 1.
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      Usage
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modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                            EMBL, M63899, AAA31594.1; -.
PIR, JS0599; JS0599; HSSP, P80119; LASSP, P80119; LASSP, MEROPS, S01.239; -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006210; IEGF
InterPro; IPR001254; Ser_Drotease_Try.
InterPro; IPR001254; Ser_Drotease_Try.
Pfam; PF00008; EGF; 1.
Pfam; PF00089; tringle; 1.
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tes 175; Conserv
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Matches
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MEDLINE-90130448; PubMed=2105315;
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                                                          DDT--YNNDIALLQLKSGSPQCAQESDSVRAICLPEANLQLPDWTECELSGYGKHKSSS 325
                                                                                                                                             PPYSEQLKEGHVRLYPSSRCTSKFLFNKTVTNNMLCAGDTRSGEIYPNVHDACQGDSGGP 385
                                     246 SADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTD 305
                                                                                                                  306 YLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKT-----DSCQGDSGGP 359
209 FLCGGILISSCWVLTAAHCFQERYPPQHLRVV-LGRTYRVKPGKEEQTFEVEKCIIHEEF 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.

FTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATALYZED BY FLASMIN, TISSUE KALLIKREIN OR FACTOR XA.

MISCELLANEOUS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

SIMILARITY: COLLAINS I EGF-like domain.

SIMILARITY: Contains I EdF-like domain.

SIMILARITY: Contains 2 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                       01-FEB-1991 (Rel. 17, Created)
01-NOV-1991 (Rel. 20, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ny T., Leonardsson G., Hsueh A.J.W.; "Cloning and characterization of a cDNA for rat tissue-type plasminogen activator."; DNA 7:671-677(1988).
                                                                                                                                                                                               LVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTK 404
                                                                                                                                                                                                                     559 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=89170114; PubMed=3148445;
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| PRINTS; PRO0122; CHYMOTRYPSIN, | PRINTS; PRO0122; CHYMOTRYPSIN, | PRINTS; PRO0122; CHYMOTRYPSIN, | PRINTS; PRO0122; CHYMOTRYPSIN, | PRO0181; ERF | PROD0185; KRINGLE. | R SMART; SM00181; ERF; 1. | SMART; SM00120; FR; 2. | SMART; SM00020; Tryp SPc; 1. | R SMART; SM00020; Tryp SPc; 1. | R PROSITE; PS0123; FIBROMECTIN, 1; 1. | PROSITE; PS0123; FIBROMECTIN, 1; 1. | PROSITE; PS0123; FIBROMECTIN, 1; 1. | PROSITE; PS50240; TRYPSIN, ERF, 2. | R PROSITE; PS00134; TRYPSIN, ERF, 1. | R PROSITE; PS00134; TRYPSIN, ERF, 1. | R PROSITE; PS00134; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00134; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; PS00135; TRYPSIN, ERF, 1. | PROSITE; 
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TISSUE-TYPE PLASMINOGEN
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CHARGE RELAY SYSTEM.
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CHARGE RELAY SYSTEM.
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EGF-LIKE.
                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; BGF_like.
InterPro; IPR006210; BGF_like.
InterPro; IPR006210; ISGF.
InterPro; IPR00001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PP00008; EGF; 1.
Pfam; PP00009; Kringle; 2.
Pfam; PP00009; kringle; 2.
Pfam; PP00009; kringle; 2.
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M31195; AAA42261.1; JOINED.
M31196; AAA42261.1; JOINED.
A19618; CAA01482.1; -.
                                                             AAA42261.1;
AAA42261.1;
AAA42261.1;
AAA42261.1;
AAA42261.1;
AAA42261.1;
AAA42261.1;
AAA42261.1;
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HSSP; P00750; IRTF.
                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.232;
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30
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EMBL;
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us-09-880-503-3.rsp

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CHSVPVRSCSEPRCFNGGTCQQALYFSDF-VCQCPDGFVGKRCDIDTRATCFEGQGITY 132
                                                                                                                                                        RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                    193 GKYTTEFCSTPACPKGPTEDCYVGKGVTYRGTHSFTTSKASCLPWNSMILIGKTYTAWRA 252
                                                                                                                                                                                                                                                 : | : | : : | : : | 253 NSQALGLGRHNYCRNPDGDAKPWCHVMKDRKLTWEYCDMSPCSTCGLRQYKQPQFRIKGG 312
                                                                                                                                                                                                                                                                                     487 NMLCAGDTRIGGNQDVHDACQGDSGGPLVCMIDKRMTLLGIISWGLGCGQKDVPGIYTKV 546
                                                                                                                                                                                                                                                                          163 EFTTIENOPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR 221
                                                                                                                                                                                                                                                                                                               SRINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLP 281
                                                                                                                                                                                                                                                                                                                                                     SMYNDPQF----GISCELIGEGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTT 337
                                                                                                                                                                                                                                                                                                                                                                   ----DPDVQLPDWTECELSGYGKHEASSPFFSDRLKEAHVRLYPSSRCTSQHLFNKTITS 486
                                                                                                                                                                                                                                                                                                                                                                                           KMLCAADP----QWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRV 392
                                                                                                                   3 ELHQVP----SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
                                                                                                                                                                                                                                    ------CGQKTLR-PRFKIIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
211vary plasminogen activator alpha 1 precursor (EC 3.4.21.68) (DSPA
                                                                                                  Gaps
BY SIMILARLY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
E -> K (IN REF. 1).
E -> K (IN REF. 1).
TOBD3809C1D1C921 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota, Metazoa, Chôrdata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Chiroptera, Microchiroptera, Phyllostomidae,
Desmodontinae, Desmodus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Salivary gland;
MEDLINE=292039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
Gene 105:229-237(1991).
                                                                                                  97;
                                                                             36.7%; Score 844.5; DB 1; Length 559; 36.9%; Pred. No. 2e-59; live 64; Mismatches 150; Indels 97;
                                                                                                                                                                                               LKPLVQECM-----KPSSPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  477 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
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                                                            62903 MW;
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                                                                                                 Matches 182; Conservative
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    516
490
534
149
481
   442
474
506
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481
380
559 AA;
                                                                                         Similarity
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ID URT1_DESRO
AC P98119;
   DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                        TISSUE-Salivary gland;
MEDLINE=98022741; PubMed=9354616;
MEDLINE=98022741; PubMed=9354616;
Renatus M., Stubbs M.T., Huber R., Bringmann P., Donner P.,
Schleuning W.D., Bode W.;
"Catalytic domain structure of vampire bat plasminogen activator: a
molecular paradigm for proteolysis without activation cleavage.";
Biochemistry 36:13483-13493(1997).
-!- FUNCTION: PROBABLY ESERITIAL TO SUPPORT THE FEEDING HABITS OF THIS
EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. POTENT THROMBOLYTIC AGENT.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
plasminogen to form plasmin.
-!- ENZYME REGULATION: ACTIVITY TOWARD PLASMINOGEN IS STIMULATED IN
THE PRESENCE OF FIBRIN I.
                                                                                                                                          Donner P.; "Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity."; Ann. N.Y. Acad. Sci. 667:395-403(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FIBRIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS50134; TRYPSIN_BCM; 1.
PROSITE; PS00134; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PLAGMINOGEN activation; Hydrolase; Serine protease; Glycoprotein; Kringle; EGF-like domain; Signal; Multigene family; 3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SUBUNIT: Monomer.
-!- DOMAIN: THE FIBRONECTIN TYPE-I DOMAIN MEDIATES BINDING TO
AND THE KRINGLE DOMAIN APPARENTLY MEDIATES FIBRIN-INDUCED
                                                                       Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri .
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. SIMILARITY: Contains 1 EGF-like domain. SIMILARITY: Contains 1 fibronectin type I domain. SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).
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InterPro; IPR000010; IEGF.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom, PD000395, Kringle, 1.
SWART; SW00181; EGF; 1.
SWART; SW00018; FN1, 1.
SWART; SW00020; KR; 1.
SWART; SW00020; Tryp SPC; 1.
PROSITE; PS01186; EGF_2; 1.
PROSITE; PS01186; EGF_2; 1.
PROSITE; PS01253; FIBEONECTIN 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlycoSuiteDB; P98119; -.
InterPro, IPR001314; Chymotrypsin.
InterPro, IPR006209; EGF_like.
CHARACTERIZATION.
MEDLINE=93393059; PubMed=1309059;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00008; EGF; 1.
Pfam; PF00003; fn1; 1.
Pfam; PF00051; kringle; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; GHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M63987; AAA31591.1; -.
EMBL; M63986; AAA31592.1; -.
PIR; JS0597; JS0597.
PDB; 1A51; 23-MAR-99.
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PROSITE; PS50240;
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10;
                                                        80 HTVPVNSCSEPRCFNGGTCWQAVYFSDF-VCQCPAGYTGKRCEVDTRATCYEGQGVTYRG 138
                                                                                                   121 PLVQECMVHDCADGKKPSSPPEELKFQCG-QKTLRPRFKIIGGEFTTIENQPWFAAIYRR 179
                                                                                                                                                                     FTSESCSVPVCS-----KATCGLRKYKEPQLHSTGGLFTDITSHPWQAAIFAQ 246
                                                                                                                                                                                                180 HRGGS-VTYVCGGSLISPCWISATHCFIDYPKKEDYI-----VYLGRSRLNSNTQGEMK 233
                                                                                                                                                                                                                  MEDLINE-238257; PubMed-12477932;

MEDLINE-238257; PubMed-12477932;

MEDLINE-238257; PubMed-12477932;

MEDLINE-238257; PubMed-12477932;

MA Klausner R.D., Collins F.S., Wagner L.H., Derge J.G.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hasieh F.,

Matchenko L., Marusina K., Parmer A.A., Rubin G.M., Hong L.,

Rapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

R. Rhans S., Worley K.M., Sodergren E.J., Lu X., Gibbs R.A.,

M. Villalon D.K., Murny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

W. Milting M. Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

M. Mitting M. M., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
                                                                                                                                                                                                                                                        FEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSC
                                                                                                                                                                                                                                                                          HOVPSN-CD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                  61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK
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  Gaps
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Rickles R.J., Darrow A.L., Strickland S.;
"Molecular cloning of complementary DNA to mouse tissue plasminogen
activator mRNA and its expression during F9 teratocarcinoma cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
NCBI_TaxID=10090;
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  Matches 175; Conservative
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Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."

Proc. Natl. Acad. Sci. U.S., 99:16899-16903(2002).

-!- FUNCTION: CONVERTS THE ABUNDANT, BUT INACTIVE, ZYMOGEN PLASMINOGEN TO PLASMIN BY HYDROLYZING A SINGLE RRG-VAL BOND IN PLASMINOGEN. BY CONTROLLING PLASMIN-MEDIATED PROTECLYSIS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND MANY OTHER PHYSIOPATHOLOGICAL EVENTS.

-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in plasminogen to form plasmin.

-!- SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
                                                                                                                                                                                                                      SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.

PTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATHLYZED BY PLASMIN, TISSUE KALLIKREIN OR FACTOR XA.

MISCELLANEOUS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENHANCES ITS CATALYTIC ACTIVITY.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

SIMILARITY: Contains I EGF-like domain.

SIMILARITY: Contains I fibronectin type I domain.
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REMBL; BC011256; AA411256.1; -.

REMBL; BC011256; AA411256.1; -.

REMBL; BC011232; -.

REMBC; BC01231: -.

REMBC; MAI: 97610; Plat.

INTERPOS; S01.232; -.

REMC; MAI: 97610; Plat.

INTERPOS; IFRO00209; EGF_11ke.

INTERPOS; IFRO00209; EGF_11ke.

INTERPOS; IFRO00001; Kringle.

REMC; PF00009; EGF; 1.

REMC; PF00009; EGF; 1.

REMC; PF00009; EGF; 1.

REMC; REMCOS; KRINGLE.

REMC; SMO0029; KRINGLE.

REMC; SMO0029; KRINGLE.

REMC; SMO0020; KRINGLE.

REMC; SMO0020; TYP, SPC; 1.

REMC; SMO0020; TYP, SPC; 1.

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                                                                                                                                                                                                                                                                              Ravn P., Berglund L., Petersen T.E.; "Cloning and characterization of the bovine plasminogen activators uPA and tPA.";
                                                                                                                                                                                                                                                                                                                                                             DAILY J. 5:605-617(1995).

FUNCTION: CONVERTS THE ABUNDANT, BUT INACTIVE, ZYMOGEN PLASMINOGEN
TO PLASMIN BY HYDROLYZING A SINGLE ARG-VAL BOND IN PLASMINOGEN. BY
CONTROLLING PLASMIN-MEDIATED RROTEOLYSIS, IT PLAYS AN IMPORTANT
ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND
MANY OTHER PHYSIOPATHOLOGICAL EVENTS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.

PTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAPARGE AFTER ARG-314 CATALYZED BY PLASMIN, TISSUE KALLIKREIN OR FACTOR XA.
MISCELLANEOUS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENHANCES ITS CATALYTIC ACTIVITY.
SIMILARITY: COLLAINS I EGF-like domain.
SIMILARITY: Contains I EGF-like domain.
SIMILARITY: Contains 2 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin. SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
                                                                                                                                                            Bukaryota; Merazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                             01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator).
566 AA.
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INTERPO; IPRO06209; EGF_like.
INTERPO; IPRO06209; EGF_like.
INTERPO; IPRO06209; EGF_like.
INTERPO; IPRO06209; EGF_like.
INTERPO; IPRO06010; Kringle.
INTERPO; IPRO0029; EGF, 1.
Pfam; PF00009; EGF, 1.
Pfam; PF00009; EGF, 1.
Pfam; PF00009; EGF, 1.
PRINTS; PR00722; CHYMORRYPSIN.
PRINTS; PR00018; KRINGLE.
SMART; SM00180; KRINGLE.
SMART; SM00180; KR, 2.
SMART; SM00180; KR, 2.
SMART; SM00180; EGF, 1.
PROSITE; PS01022; EGF, 1.
PROSITE; PS01023; FIREONECTIN 1; 1.
PROSITE; PS011253; FIREONECTIN 1; 1.
PROSITE; PS01253; FIREONECTIN 1; 1.
PROSITE; PS01253; FIREONECTIN 1; 1.
PROSITE; PS01021; KRINGLE_2; 2.
                                                                                                                                                                                                                                                                                                                                                         Int. Dairy J. 5:605-617(1995)
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STANDARD;
                                                                                                                                                Bos taurus (Bovine).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280 LPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKM 339
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78 OCHSVPVRSCSEPWCFNGGTCRQALYSSDF-VCQCPEGFMGKLCEIDATATCYKDQGVAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197 GKYISEFCSTPACAKVAEEDGDCYTGNGLAYRGTRSHTKSGASCLPWNSVFLTSKIYTAW
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161 GGEFTTIENQPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYL
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PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein; Plasma; Kringle; EGF-like domain; Repeat; Signal.
SIGNAL
1 21 BY SIMILARITY.
PROPEP 22 33 BY SIMILARITY.
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N-LINKED (GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                          TISSUE-TYPE PLASMINOGEN ACTIVATOR CHAIN.
                                                                                                                                      TISSUE-TYPE PLASMINOGEN ACTIVATOR.
TISSUE-TYPE PLASMINOGEN ACTIVATOR
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KRINGLE 1.
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KRINGE RELAY SYSTEM.
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                                                                                                                                                                                                                              FIBRONECTIN TYPE-I.
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Matches 179; Conservative
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566 AA;
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DISULFID
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LCAADPQW-----KTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVS 393
              "Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 667.395-403(1992).
-!- FUNCTION: PROBABLY ESENTIAL TO SUPPORT THE FEEDING HABITS OF THI EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                     (EC 3.4.21.68) (DSPA
                                                                                                                                                                                                               gamma).

Desmodus rotundus (Vampire bat).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Mammalia; Eutheria; Chiroptera; Microchiroptera; Phyllostomidae;

Desmodontinae; Desmodus.
                                                                                                                                                                                                                                                                                                               TISSUE=Salivary gland;
MEDLINE=92039036; PubMed=1937019;
MEDLINE=92039036; PubMed=1937019;
Alactschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
"The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                 CHARACTERIZATION.
MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond plasminogen to form plasmin.
SUBUNIT: Monomer.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                     Salivary plasminogen activator gamma precursor
                                                                                                                                                             (Rel. 33, Created)
(Rel. 33, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                       394 AA
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InterPro; IPRO01314; Chymotrypsin.
InterPro; IPRO01304; Kringle.
InterPro; IPRO01254; Ser_protease_Try.
Pfam; PF00051; kringle; I.
Pfam; PF00089; trypsin; I.
                                                                                                                                     PRT;
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PRINTS; PR00018; KRINGLE.
ProDom, PD000395; Kringle; 1.
SWART; SM00130; KR; 1.
SWART; SM00020; Tryp. SPC; 1.
PROSITE; PS00021; KRINGLE_1; 1.
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                                                                          565
                                                394 HFLPWIRSHTK 404
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                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                              NCBI_TaxID=9430;
                                                                                                                                                              01-FEB-1996
                                                                                                                                                                                        28-FEB-2003
                                                                                                                                    URIG DESRO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 DPHATCYKDQGVTYRGTWSTSESGAQCINWNSNLLIRRTYNGRMPEAVKLGLGNHNYCRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 PDGASKPWCYVIKARKFISESCSVPVCS------KATCGLRKYKEPQLHSTGGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         265 BANLQLPDWTBCELSGYGKHKSSSPFYSEQLKEGHVRLYPSSRCTSKFLFNKTVTNNMLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        325 AGDTRSGEIYPNVHDACQGDSGGPLVCMNDNHMTLLGIISWGVGCGEKDIPGVYTKVTNY
                                                                                                                                                                                                                                                                                                                                                                                                                                               45 DKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQOTYHAHRSDALQLGLGKHNYCRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PDNRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCG-QKTLRPRFKIIGGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 222 SRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             282 SMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLC
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                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
PROSITE; PS50070; KRINGLE_2; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein;
                                                                                                          SALIVARY PLASMINOGEN ACTIVATOR GAMMA.
KRINGLE.
                                                                                                                                                                   SIMILARITY) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606,
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                    24;
                                                                                                                                                                                                                                                                                                                                          .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                     Length 394;
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                                                                                                                                                                                                                                                                                                                                                                                    Score 752; DB 1; Length 39 Pred. No. 2.8e-52; Mismatches 134; Indels
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                                                                                                                                       PROTEASE
                                                                  Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                26;
                                                                                                                                                                                                                                                                                                                                                       44105 MW;
                                                                                                                                                                                                                                                                                                                                                                                 32.7%;
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                                                                                                                                                                                                                                                                                                                                                       394 AA;
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                                   Miyazawa K., Shimomura T., Kitamura A., Kondo J., Morimoto Y., Kitamura N.;
"Molecular cloning and sequence analysis of the cDNA for a human serine protease reponsible for activation of hepatocyte growth factor. Structural similarity of the protease precursor to blood coagulation factor XII.";
                                                                                                                                          SEQUENCE OF 40-655 FROM N.A.

Zhao S., Odell C.;
Submitted (FRE-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY
CONVERTING IT PROM A SINGLE CHAIN TO A HETERODIMERIC FORM.
-!- SUBUNIT: DIMER OF A SHORT CHAIN AND A LONG CHAIN LINKED BY A
                                                                                                                                                                                                                                 -!- SUBCELLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN PRECURSOR AND IS THEN ACTIVATED TO A HETERODIMERIC FORM.
-!- TISSUE SPECIFICITY: LIVER.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 2 EGF-like domains.
-!- SIMILARITY: Contains 1 fibronectin type I domain.
-!- SIMILARITY: Contains 1 fibronectin type II domain.
-!- SIMILARITY: Contains 1 fibronectin type II domain.
-!- SIMILARITY: Contains 1 kindle domain.
-!- SIMILARITY: Contains 1 kindle domain.
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MONIS 604552; -...
GO; GO:0005576; C:extracellular; TAS.
GO; GO:000568; P:proteolysis and peptidolysis; TAS.
InterPro; IPR00114; Chymotrypsin.
InterPro; IPR00114; Chymotrypsin.
InterPro; IPR001049; EGF 2:
InterPro; IPR000083; Fibrnctn1.
InterPro; IPR000083; Fibrnctn1.
InterPro; IPR000001; Kringle.
InterPro; IPR001054; Ser_protease_Try.
Pfam; PP00008; EGF; 2.
Pfam; PP00008; EGF; 1.
SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
TISSUE=Liver, and Serum;
MEDLINE=93252878; PubMed=7683665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam, PF00001, III.; 1.
Pfam, PF00001, Kringle; 1.
Pfam, PF00001, Kringle; 1.
PRINTS, PR00012, CTYMOTRYPSIN, 1.
PRINTS, PR00013, FNTYPSII.
PFINTS, PR00013, FNTYPSII.
PFODOM; PR000195, Kringle; 1.
ProDom; P0000195, Kringle; 1.
SMART; SM0018, FN1; 1.
SMART; SM00059; FN1; 1.
SMART; SM00020; TNYP, SPC; 1.
PROSITE; PS01186; EGF 1; 2.
PROSITE; PS01186; EGF 1; 2.
PROSITE; PS01186; EGF 1; 2.
PROSITE; PS01186; EGF 1; 1.
PROSITE; PS01023; FIBRONECTIN 1; 1.
PROSITE; PS01023; FIBRONECTIN 1; 1.
                                                                                                                  Biol. Chem. 268:10024-10028(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; D14012; BAA03113.1; -. EMBL; Z69923; CAA93803.1; -.
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HSSP; P00763; 1DPO.
MEROPS; S01.228; -.
Genew; HGNC:4894; HGFAC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117 VGLKPLVQECMVHDC-----TURPRFK 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IIGGEFTTIENOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY 218
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK 338
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242 HTACLSSPCLMGGTC-----HLIVATGTTVCACPPGFAGRLCNIEPDERCFLGNGT
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Pred. No. 1e-50;
3; Mismatches 166; Indels 47
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2CF72F1E1B862ED7 CRC64;
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FIBRONECTIN TYPE-II.
EGF-LIKE 1.
FIBRONECTIN TYPE-I.
EGF-LIKE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                SERINE PROTEASE
PROSITE, PS50070, KRINGLE 2; 1.
PROSITE, PS50240; TRYPSIN DOM; 1.
PROSITE, PS00134, TRYPSIN HIS; 1.
PROSITE, PS00135, TRYPSIN SER; 1.
Hydrolase, Glycoprotein; Plasma; Serine EGF-like domain; Repeat; Zymogen.
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Matches 160; Conservative
                                                                                                                                                                                                                                                                                                                              644
655 AA;
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5 HQVPSNCDCLNGGTCVSNKYFSNIHW------CNCPKKFGGQHCEIDKSKTCYEGNGH
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CLPEPGSTFPAGHKCQIAGWGHLDENVSGYSSSLREALVPLVADHKCSSPEVYGADISPN 580
                                                                                                MLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPW 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Van Adelsberg J.S., Sehgal S., Kukes A., Brady C., Barasch J.,
Van Adelsberg J.S., Sehgal S., Kukes A., Brady C., Barasch J.,
Vann J., Huan Y.;
"Activation of HGF by endogenous HGF activator is required for
metanephric kidney morphogenesis in vitro.";
Submitted (JAN-2000) to the EMBL/Genbank/DDBJ databases.
-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY CONVERTING
-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY CONVERTING
-!- FUNCTION: ACTIVATE OF A SHORT CHAIN AND A LONG CHAIN LINKED BY A
DISULPIDE BOND (BY SHULLARITY)
-!- SUBCILLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN
PRECURSOR.AND IS THEN ACTIVATED TO A HETERODIMERIC FORM (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                       HGFA_MOUSE STANDARD; PRI; 653 AA.
Q9R0891, Q9R0894;
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 41, Last annotation update)
28-FRBE-2003 (Rel. 41, Last annotation update)
Hepatocyte growth factor activator precursor (EC 3.4.21.-) (HGFA)
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Itoh H., Kataoka H., Koono H.;
"Mouse hepatroyte growth factor activator.";
Submitted (MAR-1999) to the EMBL/GenBank/DDBU databases.
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-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 2 EGF-like domains.
-!- SIMILARITY: Contains 1 fibronectin type I domain.
-!- SIMILARITY: Contains 1 fibronectin type II domain.
-!- SIMILARITY: Contains 1 kringle domain.
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000742; BGF 2.
InterPro; IPR00083; Fibrnctn1.
InterPro; IPR000662; RT Type_II.
InterPro; IPR000662; RT Type_II.
InterPro; IPR0006210; IBGF.
InterPro; IPR000011; Kringle.
InterPro; IPR001254; Ser_protease_Iry.
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Best Local Similarity 37.3%; Pred. No. 5.6e-50;
Matches 158; Conservative 57; Mismatches 167; Indels
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Semba U., Yamamcto T., Kunisada T., Shibuya Y., Tanase S.,
Semba U., Yamamcto T., Kunisada T., Shibuya Y., Tanase S.,
Kambara T., Okabe H.;
The Trimary structure of guinea-pig Hageman factor: sequence around the cleavage site differs from the human molecule.";
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01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
(HAF) (Fragment).
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Hystricognathi, Caviidae, Cavia.
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the European Bioinformatics Institute. There are no restrictions on its mose by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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ALPHA-FACTOR XIIA LIGHT
FIBRONECTIN TYPE-II.
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FIBRONECTIN TYPE-1.
EGF-LIKE 2.
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PRO-RICH.
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InterPro; IPR001881; EGF_Ca.
InterPro; IPR001881; EGF_Ca.
InterPro; IPR000083; Fibrnchn.
InterPro; IPR000652; FN Type_II.
InterPro; IPR0006210; IEGF.
InterPro; IPR001001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 2.
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EGF_2.
EGF_Ca.

EGF_like.

FIbrnctnl.
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Pfam; PF00051; kringle; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
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CLNGGRCLE---VEGHHLCDCPMGYTGPFCDLDTTASCYEGRGVSYRGMARTTVSGAKCQ 238
                                                                                                                                                                                                                                                                            239 RWAS----EATYRNMTAEQALRRGLGHHTFCRNPDNDTRPWCFVWMGNRLSWEYCDLAQC 294
                                                                                                                                                                                                                                                                                                                                                                                 157 F----KIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKK 212
                                                                                                                                                                                                                                                                                                                                                                                                   SRTIQTICLPSMYNDPQFG--TSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPH 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330 YYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVC---SLQGRMTLTGIVSWGRGCALKDKP 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73 PWNSATVLQQTYHAHRSD-ALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
                                                                                                                                                                                                                                                                                                                       295 QYPPQPTATPHD-RFEHPKLPSSRLSILQTPQPTTQNQALANELPETSSLLCGQR-LRKR 352
                                                                                                                                                                                                                                                                                                                                                                                                                                           213 EDYIVYLGRSRINSNIQGEMKFEVENLILHKDYSADILAHHNDIALLKI-RSKEGRCAQP 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPYVOTVCLPSGPAPPSESETTCCEVAGWGHQFEGAEEYSSFLQEAQVPLISSERCSSPE 524
                                                                                                                                                                                                13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . ) (POTENTIAL).
N-LINKED (GLCNAC. . ) (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-Jul-1986 (Rel. 01, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Coagnlation factor XII precursor (EC 3.4.21.38) (Hageman factor)
(HAF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=88007533; PubMed=2888762;
Cool D.E., McGillivray R.T.A.; "Hodd coagulation factor XII ge
"Characterization of the human blood coagulation factor XII ge
Intron/exon gene organization and analysis of the 5'-flanking
                                                                                                                                      31.2%; Score 718.5; DB 1; Length 603;
                                                                                                                                                                   64; Mismatches 149; Indels
                                                                                                                                                        Pred. No. 2e-49;
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603 AA;
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P00748; P78339;
21-JUL-1986 (Re
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CARBOHYD
CARBOHYD
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Best Local
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Schloesser M., Hofferbert S., Bartz U., Lutze G., Lammle B., Engel W., "The novel acceptor splice site mutation 11396(G-->A) in the factor XII gene causes a truncated transcript in cross-reacting material negative patients.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Coagulation factor XII Locarno: the functional defect is caused by the amino acid substitution Arg-353-->Pro leading to loss of a
                                                                                 "CDNA, sequence coding for human coagulation factor XII (Hageman).";
Nucleic Acids Res. 14:3146-3146(1986).
                                                                                                                                                                                                         "Characterization of human blood coagulation factor XII cDNA." Prediction of the primary structure of factor XII and the tertiary structure of beta-factor XIIa.", J. Biol. Chem. 260:13666-13676(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-85182674; PubMed=3886654; MCMullen B.A., Fujikawa K.; "Amino acid sequence of the heavy chain of human alpha-factor XIIa (activated Hageman factor).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Coagulation factor XII (Hageman factor) Washington D.C.: inactive factor XIIa results from Cys-571-->Ser substitution."; Proc. Natl. Acad. Sci. U.S.A. 86:8319-8322(1989).
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Harris R.J., Ling V.T., Spellman M.W.;
"O-linked fuccose is present in the first epidermal growth factor
domain of factor XII but not protein C.",
J. Biol. Chem. 267:5102-5107(1992).
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MEDLINE-99290785; PubMed=10361128;
Kondo S., Tokunaga F., Kawano S., Oono Y., Kumagai S., Koide T.;
                                                                                                                                                                                                                                                                                                                                      Que B.G., Davie E.W.; "Characterization of a cDNA coding for human factor XII (Hageman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Miyata T., Kawabata S.-I., Iwanaga S., Takahashi I., Alving B.,
                                                                                                                                                  MEDLINE-86033830; PubMed-3877053;
Cool D.E., Edgell C.-J.S., Louie G.V., Zoller M.J., Brayer G.
McGillivray R.T.A.;
                                             Tripodi M., Citarella F., Guida S., Galeffi P., Fantoni A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 354-362 AND 373-615.
MEDLINE-8291061; PubMed-6604055;
Fujikawa K., McMullan B.A.;
"Amino acid sequence of human beta-factor XIIa.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biol. Chem. 258:10924-10933(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Biol. Chem. 260:5328-5341(1985).
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                                MEDLINE=86176794; PubMed=3754331;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 561-615 FROM N.A.
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3100d 84:1173-1181(1994).
                                                                                                                                        SEQUENCE OF 14-615 FROM N.A.
[3]
SEQUENCE OF 4-615 FROM N.A
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                                                                        Cortege R.;
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THE INITIATION FACTOR XII IS A SERUM GLYCOPROTEIN THAT PARTICIPATES IN THE INITIATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE GENERATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE GENERATION OF BRADYKININ AND ANGOTENEN; AND THE DENERATION OF BRADYKININ AND ANGOTENENS.

-!- CATALYTIC ACTIVITY: Cleaves selectively Arg-|-Ile bonds in factor VII to form factor VIIa and factor XI to form factor XIa.

-!- AND N-GLYCOSYLATED.

-!- DISEASE: DEFECTS IN F12 DO NOT CAUSE ANY CLINICAL SYMPTOMS. THE SOLE EFFECT IS THAT WHOLE-BLOOD CLOTTING TIME IS PROLONGED.

-!- MISCELLENBOUS: FACTOR XII, PRERALLIKREIN, AND HWW KININOGEN FORM A COMPLEX BOUND TO AN ANIONIC SURFACE. PREFALLIKREIN IS CLEAVED BY FACTOR XII TO FORM KALLIKREIN, WHICH THEN CLEAVES FACTOR XII FIRST XIIA ACTIVATES FACTOR XII TO FACTOR XIA.

-!- SIMILARITY: Contains 1 fibronectin type I domain.

-!- SIMILARITY: Contains 1 fibronectin type II domain.

-!- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
    negative factor XII
"Factor XII Tenri, a novel cross-reacting material negative fa deficiency, occurs through a proteasome-mediated degradation." Blood 93:4300-4308(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIM; 234000; -.
GO; GO:0003805; F:blood coagulation factor XI activity; TAS.
GO; GO:0003806; F:blood coagulation factor XII activity; TAS.
GO; GO:0007596; F:blood coagulation; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IRR001314; Chymotrypsin, InterPro; IRR001314; Chymotrypsin, InterPro; IRR001030; ERF like, InterPro; IRR000083; Fibrncth1.
InterPro; IRR000083; Fibrncth1.
InterPro; IRR000001; Kringle.
InterPro; IRR000001; Kringle.
InterPro; IRR000001; Kringle.
Pfam; PF00009; EGF; 2.
Pfam; PF00009; Int; 1.
Pfam; PF00009; Int; 1.
Pfam; PF00009; Int; 1.
Pfam; PF00009; Irypsin; 1.
Pfam; PF00099; Irypsin; 1.
PRINTS; PR00012; CHYMOTRYPSIN.
PRINTS; PR00013; FNITYPEII.
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EMBL, AF536691; AAM97332.1; -...
EMBL, M11723; AAA51986.1; -...
EMBL; M17466; AAB59490.1; -...
EMBL; M17464; AAB59490.1; -...
EMBL; M1347; AAA70224.1; -...
EMBL; M13147; AAA70224.1; -...
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HSSP; P00763; 1DPO.
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PWNSATVLQQTY-HAHRSDALQLGLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262 R-SKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLI 320
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145 KFQCGQ---KTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVIS 201
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PROSITE; PS50240; TRYPSIN_DOM; 1.

DR PROSITE; PS50240; TRYPSIN_DOM; 1.

DR PROSITE; PS60134; TRYPSIN_DOM; 1.

DR PROSITE; PS60135; TRYPSIN_SIN; 1.

KW Glycoprotein; Blood coagulation; Plasma; Kringle; Serine protease; KW Hydrolase; Fibrinolysis; Signal; EGF-like domain; Repeat; Zymogen; KW Hydrolase; Fibrinolysis; Signal; EGF-like domain; Repeat; Zymogen; FT SIGNAL 1 20 372 ALPHA-FACTOR XIIA HEAVY FT CHAIN 373 615 ALPHA-FACTOR VITA HEAVY TO THAIN 373 615 RPTT TO DOMAIN 373 615 RPTT TO DOMAIN
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O-LINKED (POTENTIAL).

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CHARGE RELAY SYSTEM (BY SIMILARITY).

CHARGE RELAY SYSTEM (BY SIMILARITY).
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Pred. No. 2.6e-47;
60; Mismatches 163; Indels
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FIBRONECTIN TYPE-I.
EGF-LIKE 2.
KRINGLE.
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Matches 153; Conservative
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Best Local Similarity 35.1%;
Matches 155; Conservative 6
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Library 16:2270-2278(1977).

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Library 16:2270-2278(1977).

Library 16:2270-2278(1977).

Library 16:2270-2278(1977).

THE INITIATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE GENERATION OF BRADYKININ AND ANGIOTENSIN.

Library 10:20 Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Complex Co
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                                                                                                                                                                                                                                                    TISSUE-Liver;
MEDLINE-94247782; PubMed=8186251;
Shibuya Y., Semba U., Okabe H., Kambara T., Yamamoto T.;
Shibuya Y., Semba U., Okabe H., Kambara T., Yamamoto T.;
"Primary structure of bovine Hageman factor (blood coagulation factor
"In: comparison with human and gninea pig molecules.";
Biochim. Biophys. Acta 1206:63-70(1994).
                                                                                         Bos taurus (Bovine).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
28-FEB-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
(HAF) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                               [2] SEQUENCE OF 10-21, 350-364 AND 525-550.
SEQUENCE OF 10-21, 9ubMed=861210;
Fujikawa K., Malsh A.K., Davie W.E.,
"Isolation and characterization of bovine factor XII (Hageman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000083; Fibrnctn1.
InterPro; IPR000562; FN Type_II.
InterPro; IPR000010; Kringle.
InterPro; IPR000011; Kringle.
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Pfam; PF00051; kringle; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00013; RAYMOTRIPEII.
PRINTS; PR00018; KRINGLE.
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HSSP; P00763; 1DPO.
MEROPS; S01.211; -.
                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279 WNYCRLAPCQAAAGHEHFPLPSPSALQKPESTTQTPLPSLTSGWCSPTPLASGGPGGCGQ 338
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RR SWART; SM0059; FN2; 1.

SMART; SM00059; FN2; 1.

SMART; SM00020; TKP; 1.

RR SMART; SM00020; TKP; 1.

RR PROSITE; PS01022; EGF 1; 2.

RR PROSITE; PS01023; FIBRONECTIN 1; 1.

PROSITE; PS00021; KRINGLE 1; 1.

RR PROSITE; PS0001; KRINGLE 1; 1.

RR PROSITE; PS0014; TRYPSIN DOM; 1.

PROSITE; PS0014; TRYPSIN DOM; 1.

RR PROSITE; PS00134; TRYPSIN DOM; 1.

RR PROSITE; PS00135; TRYPSIN SER; 1.

RR PROSITE; PS00135; TRYPSIN SER; 1.

RR GIYCOPTOTE; NION SER; 1.

RHYGROLASE; Fibinolysis; EGF-like domain; Repeat; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 TDTMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPL
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(GLCNAC. . .) (POTENTIAL)
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ALPHA-FACTOR XIIA HEAVY
ALPHA-FACTOR XIIA LIGHT
FIBRONECTIN TYPE-II.
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CO-LINKED (GLCNAC. . . .
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EGF-LIKE 2.
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N-LINKED
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PIR; S03733; PLPG.
HSSP; P00747; 5HPG.
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                                                    MEROPS; S01.233;
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CARBOHYD
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Marti T., Schaller J., Rickli E.E., Schmid K., Kamerling J.P.,

Marti T., Schaller J., Rickli E.E., Schmid K., Kamerling J.P.,

Gerwig G.J., van Halbeek H., Vliegenthart J.F.,

The N- and O-linked carbohydrate chains of human, bovine and porcine

AT plasminogen. Specificity in relation to sialylation and

AT fucosylation patterns.", 173:57-63 (1988).

Eur. J. Biochem. 173:57-63 (1988).

-! FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS

A PROTEOLYTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING

EMBRYONIC DEVELOPMENT, TISSUE REMODELING, TUMOR INVASION,

CRAPARIAN FOLLICLE. IT ACTIVATES THE UROKINASION,

ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH

ACTIVATOR, COLLAGENASE SIBRIN, FIBRONECTIN, THROMBOSPONDIN,

LAMININ AND VOW WILLEBRAND FACTOR.

CC -!- CATALYTIC ACTIVITY: PREferential cleavage: Lys-|-xaa > Arg-|-xaa,

CC -|- higher selectivity than trypsin. Converts fibrin into soluble
 266
                          450
                                                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                                 Schaller J., Marti T., Roesselet S.J., Kaempfer U., Rickli B.E.; "Amino acid sequence of the heavy chain of porcine plasmin. Comparison of the carbohydrate attachment sites with the human and bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENZYME REGULATION: CONVERTED INTO PLASMIN BY PLASMINOGEN
ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOUND TO
FIBRIN. CANNOT BE ACTIVATED WITH STREPFORTINASE.
FIM: N.-LINKED GLYCAN CONTAINS U-ACCEPTILACTOSAMINE, SIALIC ACID AND
IS CORE FUCOSYLATED. O-LINKED GLYCANS CONSIST OF GAL-GALNAC
DISACCHARIDE WITH IS MODIFIED WITH UP TO 2 SIALIC ACID RESIDUES
DYPKKEDYIVYLGRSRLNSNTQGEMKFBVENLILHKDYSADTLAHHNDIALLKIR-SKEG
                                                                451 CCAHPSPFVQPVCLPSTAARPAESBAAVCEVAGWGHQFEGGE-YSSFLQEAQVPLIDDQR
                                                                                                                    NRPAPKELTVVLGODRHNOSCEQCOTLAVRDYRLHEAFSPITYQH--DLALVRLQESADG
                                                 RCAQPSRTIQTICLPSMYNDPQFGTS--CEITGFGKENSTDYLYPEQLKMTVVKLISHRE
                                                                                                      ---SLQGRMTLTGIVSWGRGCA
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Sus.
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MISCELLANEOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN IMMEDIATELY AFTER DISSOCIATION FROM THE CLOT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-85203907; PubMed-1846533;
Marti T., Schaller J., Rickli E.E.;
"Determination of the complete amino-acid sequence of porcine
                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Vertebrata;
Cetartiodactyla; Suina; Suidae;
                                                                                                    CQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVC-
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Last annotation update)
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                                                                                                                                                                                                                                                                      01-JAN-1988 (Rel. 06, Created)
01-FEB-1991 (Rel. 17, Last seq
28-FEB-2003 (Rel. 41, Last anno
Plasminogen (EC 3.4.21.7)
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YCRNPD-NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510 YCRNPDGDDNGPWCYT-TNPQKLFDYCDVPQCVTS-----SFDCGKPKVEPKKCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            157 FKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217 VYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              615 VILGAHEEYHLGEGVQEIDVSKLF--KEPS-----EADIALLKLSSP----AVITDKVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333 SEVITIKMICAADPQWKIDSCQGDSGGPLVCSLQGRMTLIGIVSWGRGCALKDKPGVYIRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277 TICLPSMYNDPQF----GTSCEITGPGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00021; KRINGLE_1; 5.
PROSITE; PS50070; KRINGLE_2; 5.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; FALSE_NEG.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Plasma; Glycoprotein; Fibrinolysis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Blood coagulation, Kringle; Zymogen; Repeat.
560 PLASMIN HEAVY CHAIN A.
790 PLASMIN LIGHT CHAIN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.9%; Score 504.5; DB 1; Length 790; 35.4%; Pred. No. 2.3e-32; ive 45; Mismatches 141; Indels 51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F04EA06E74BCD58E CRC64;
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/FTId=CAR 000019.
O-LINKED [GALNAC. .).
/FTId=CAR 000020.
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CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
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KRINGLE 2.
KRINGLE 3.
KRINGLE 4.
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InterPro; IPR00366; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Prom; Pr00051; Kringle; 5.
Pfam; Pr00024; PAN; 1.
Pfam; Pr00089; trypsin; 1.
                                                                                                                       GlycosuitebB; P06867; -...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRINTS; PR01505; PROTHROWBIN.
ProDom; PD000395; Kringle; 5.
SWART; SM00130; KR; 5.
SMART; SM00473; PAN_AP; 1.
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Best Local Similarity 35.4
Matches 130; Conservative
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Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Alussher R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Strausberg R.L., Feingold E.A., Wagner L., Sheamen C.M., Schuler G.D.,

Alussher R.D., Collins F.S., Wagner L., Sheamen C.M., Schuler G.D.,

Aluschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusha K., Farmer A.A., Rubin G.M., Hong L.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaterne P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Kettemen M., Madan A., Rodrigues S., Sanchez A.,

Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

RA "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brathwaite M., Waeltz P., Qian Y., Dudekula D., Schlessinger D.,
Nagaraja R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bannach F.G., Gutierrez A., Fowler B.J., Bugge T.H., Degen J.L., Parmer R.J., Miles L.A.;
"Localization of regulatory elements mediating constitutive and cytokine-stimulated plasminogen gene expression.";
J. Biol. Chem. 277:38579-38588(2002)
                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
MEDLINE-91184812; PubMed=2081600;
Degen S.J., Bell S.M., Schaefer L.A., Elliott R.W.;
Degen S.J., Bell S.M., Schaefer Lower, Elliott R.W.;
"Characterization of the cDNA coding for mouse plasminogen and "Characterization of the gene to mouse chromosome 17.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHARACTERIZATION OF ANGIOSTATIN, AND PARTIAL SEQUENCE.
MEDLINE=95042728; PubMed=7525077;
O'Reilly M.S., Holmgren L., Shing Y., Chen C., Rosenthal R.A.,
Moses M., Lane W.S., Cao Y. Sage E.H., Folkman J.;
"Angiostatin: a novel angiogenesis inhibitor that mediates the suppression of metastases by a Lewis lung carcinoma.";
                                                                                                                                              PLAN MOUSE STANDARD; PRT; 812 AA.
P20918; Q8CLS2; Q91WJ5;
01-FEB-1991 (Rel. 17, Created)
15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Plasminogen precursor (EC 3.4.21.7) [Contains: Angiostatin].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Genomic sequence analysis in the mouse t-complex region."; Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
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PubMed=12149246;
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393 SHFLPWI 399
                           777 SRFVTWI 783
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CHAIN A.

SHORT FORM OF

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MEDLINE=85023311; PubMed=6148961;
Malinowski D.P., Sadler J.E., Davie B.W.;
"Characterization of a complementary deoxyribonucleic human and bovine plasminogen.";
Biochemistry 23:4243-4250(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Primary structure of the B-chain of human plasmin.";
Eur. J. Biochem. 76:129-137(1977).
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Sottrup-Jensen L., Petersen T.E., Magnusson
Submitted (JUL-1977) to the PIR data bank.
                                                                                     810 AA.
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MEDLINE=76043692; PubMed=126863;
Wiman B., Wallen P.;
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                                                                                     STANDARD;
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                                                                                     PLMN HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wiman B.;
                            RESULT 23
PLMN_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NPDGDKGPWCYTTDPSVRWEYCNLKRCSETGGSVVELPTVSQEPSGPSDSETDCMYGNGK 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQ----LGLGKHNYCRNPD-NRRRP 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR----FKIIGGEFTTIE 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
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SEQUENCE OF 95-580; 581-626; 657-700 AND 732-810.
Sottrup-Jensen L., Claeys H., Zajdel M., Petersen T.E., Magnusson S.; (In) Davidson J.F., Rowan R.M., Samama M.M., Desnoyers P.C. (eds.); Progress in chemical fibrinolysis and thrombolysis, pp.3:191-209, MEDLINE=73149248; PubMed=4694729; Robbins K.C., Bernabe P., Arzadon L., Summaria L.; "The brinary structure of human plasminogen. II. The histidine loop of human plasmin: light (B) chain active center histidine sequence."; J. Biol. Chem. 248:1631-1633(1973). coding for SEQUENCE FROM N.A.
MEDLINE=90202879; PubMed=2318848;
Petersen T.E., Martzen M.R., Ichinose A., Davie E.W.;
"Characterization of the gene for human plasminogen, a key proenzyme in the fibrinolytic system.";
J. Biol. Chem. 265:6104-6111(1990). Forsgren M., Raden B., Israelsson M., Larsson K., Heden L.-O.; "Molecular cloning and characterization of a full-length cDNA clone for human plasminogen."; Febr. the Febr. Lett. 213:54-260(1987). Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. SEQUENCE OF 20-100.

Miman B., Mallone P.,

Wiman B., Wallone P.,

"Structural relationship between 'glutamic acid' and 'lysine' for

"Structural plasminogen and their interaction with the NH2-terminal

activation peptide as studied by affinity chromatography.";

Eur. J. Biochem. 50:4489-494(1975). "Amino-acid sequence of the cyanogen-bromide fragment from human plasminogen that forms the linkage between the plasmin chains."; Eur. J. Biochem. 58:539-547(1975). 21-JUL-1986 (Rel. 01, Created)
1-MAR-1989 (Rel. 10, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Plasminogen precursor (BC 3.4.21.7) [Contains: Angiostatin] acid 

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Lapcevich R., Macy C.A.,
"A recombinant human angiostatin protein inhibits experimental primary
and metastatic cancer.";
                                                                                                                                                                                                                                                                                                                                                                                                                         Marti T., Schaller J., Rickli B.B., Schmid K., Kamerling J.P., Gerwig G.J., van Halbeek H., Vliegenthart J.F., "The N. and O-linked carbohydrate chains of human, bovine and porcine plasminogen. Species specificity in relation to sialylation and fucosylation patterns.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pizzo S.V.;
"Evidence for a novel O-linked sialylated trisaccharide on Ser-248 of
                                    Groskopf W.R., Summaria L., Robbins K.C.; "Studies on the active center of human plasmin. Partial amino acid sequence of a peptide containing the active center serine residue."; J. Biol. Chem. 244:3590-3597(1969).
                                                                                                                                                                                                                        MEDLINE=85054794; PubMed=6094526;
Vali Z., Patthy L.;
The fibrin-binding site of human plasminogen. Arginines 32 and 34 are essential for fibrin affinity of the kringle 1 domain.";
J. Biol. Chem. 259:13690-13694(1984).
                                                                                                    OMEGA-AMINOCARBOXYLIC ACID-BINDING SITES.
MEDLINE=82213905; PubMed=6919539;
Trexler M., Vali Z., Patthy L.;
"Structure of the omega-aminocarboxylic acid-binding sites of hu plasminogen. Arginine 70 and aspartic acid 56 are essential for binding of ligand by kringle 4.";
J. Biol. Chem. 257:7401-7406(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHARACTERIZATION OF ANGIOSTATIN, AND PARTIAL SEQUENCE.
MEDLINES-95042728; PubMed=7525077;
O'Reilly M.S., Holmgren L., Shing Y., Chen C., Rosenthal R.A.,
Moses M., Lane W.S., Cao Y., Sage B.H., Folkman J.;
"Angiostatin: a novel angiogenesis inhibitor that mediates the suppression of metastases by a Lewis lung carcinoma.";
Cell 79:315-328(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 374-461.
MEDLINE=92031502; PubMed=1657148;
Mulichak A.M., Tulinsky A., Ravichandran K.G.;
"Crystal and molecular structure of human plasminogen kringle
                                                                                                                                                                                                                                                                                                     PHOSPHORYLATION SITE SER-597.
MEDLINE=97345939; PubMed=9201958;
Wang H., Prorok M., Bretthauer R.K., Castellino F.J.;
"Serine-578 is a major phosphorylation locus in human plasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=97207306; PubMed=9054441;
Pirie-Shepherd S.R., Stevens R.D., Andon N.L., Enghild J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=92031503; PubMed=1657149;
Wu T.-P., Padmanabhan K., Tulinsky A., Mulichak A.M.;
                                                                                                                                                                                                               FIBRIN AND OMEGA-AMINOCARBOXYLIC ACID BINDING SITES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRYSTALLOGRAPHY (2.25 ANGSTROMS) OF 374-461
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human plasminogen 2.";
J. Biol. Chem. 272:7408-7411(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   refined at 1.9-A resolution.";
Biochemistry 30:10576-10588(1991).
            ACTIVE SITE.
MEDLINE=69234739; PubMed=4240117;
                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=88185329; PubMed=3356193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97238710; PubMed=9102221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J. Biochem. 173:57-63(1988)
                                                                                                                                                                                                                                                                                                                                                                          Biochemistry 36:8100-8106(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHARACTERIZATION OF ANGIOSTATIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cancer Res. 57:1329-1334(1997),
                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYDRATE-LINKAGE SITES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Castellino F.J.; "Structure and ligand binding determinants of the recombinant kringle 5 domain of human plasminogen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57 FYRGKASTDIMGRPCLPWNSAIVLQQIYHAHR----SDALQLGLGKHNYCRNPD-NRRRP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----HCEIDKSKTCYEGNGH
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                                                                                                                                                                                                                                                                                                                                                              MEDLINE=96180681; PubMed=8611560; Mathews I.I., Vanderhoff-Hanaver P., Castellino F.J., Tulinsky A.; "Crystal structures of the recombinant kringle 1 domain of human plasminogen in complexes with the ligands epsilon-aminocaproic acid and trans-4-(aminomethyl) cyclohexane-1-carboxylic Acid."; Biochemistry 35:2567-2576(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=96194156; PubMed=8652577; Sochadel S., Hu C.-K., Marti D., Affolter M., Schaller J., Lilinas M. Rickli E.E.; Rickli E.E.; "Recombinant gene expression and 1H NMR characteristics of the kringle (2 + 3) supermodule: spectroscopic/functional individuality Gf plasminogen kringle domains."; Biochemistry 35:2357-2364(1996).
                                                                                                                           X-RAY CRYSTALLOGRAPHY (1.67 ANGSTROMS) OF 376-454.
Stec B., Yamano A., Whitlow M., Teeter M.M.;
"Structure of human plasminogen kringle 4 at 1.68 Angstrom and 277
The refined structure of the epsilon-aminocaproic acid complex of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94237157; PubMed=8181475;
Rejante M.R., Llinas M.;
"1H-NMR assignments and secondary structure of human plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIJNE=94237158; PubMed=8181476;
Rejante M.R., Llinas M.;
"Solution structure of the epsilon-aminohexanoic acid complex of
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MEDLINE=98198034; PubMed=9521645;
Chang Y., Mochalkin I., McCance S.G., Cheng B., Tulinsky A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 810;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biochem. 221:927-937(1994)
                            human plasminogen kringle 4.";
Biochemistry 30:10589-10594(1991).
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MEDLINE-90219023; PubMed=2157850;
Atkinson R.A., Williams R.J.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochemistry 37:3258-3271(1998).
                                                                                                                                                                                                                                     role of
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                 NOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
                                         SWPWQVSL--RTRFG--MHFCGGTLISPEWVLTAAHCLEKSPRPSSYKVILGAHQEVNLE 646
                                                                                                                                          647 PHVQEIEVSRLFLEPT-----RKDIALLKLSSP----AVITDKVIPACLPS----PN 690
                                                                                                                                                                                 F----GISCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAAD 344
                                                                                                                                                                                                         PROGRES.

BRING REGULATION: CONVERTED INTO PLASMIN BY PLASMINOGEN
ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOUND TO
FIBRIN. ACTIVATED WITH CATALYTIC AMOUNTS OF STREPTOKINASE.
MISCELLANGOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
MISCELLANGOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
MISCELLANGOUS: IN THE PRESENCE OF THE INHIBITOR, THE ACTIVATION
INVOLVES ONLY CLEAVAGE AFTER ARG-580, RESULTING IN 2 CHAINS HELD
ACTIVATION INVOLVES ALSO REMOVAL OF THE INHIBITOR, THE
ACTIVATION STRUCKS ALSO REMOVAL OF THE ACTIVATION PEPTIDE.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthesis...;
J. 264:5957-5965(1989).

J. Biol. Chem. 264:5957-5965(1989).

J. FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS PROTECOLYTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOPMENT, TISSUE REMODELING, TUMOR INVASION, AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE GRAAFIAN FOLLICLE. IT ACTIVATES THE WOKINASE TYPE PLASMINGEN ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH AS CI AND CS. IT CLEAVES FIBRIN, FIBRONECTIN, THROMEOSPONDIN, LAMININ AND VON WILLEBRAND FACTOR.

-: CATALYTIC ACTIVITY: PREFERENTIAL CHEAVES INC. CATALYTIC ACTIVITY: PREFERENTIAL CHEAVES AND SEVERAL CHEAVERS.
                                                                                                QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ
                                                                                                                                                                                                                                                                  345 PQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=89174660; PubMed=2925643;
Tomlinson J.E., McLean J.W., Lawn R.M.;
"Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Macaca mulatta (Rhesus macaque).

Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi,

Mamaalia, Eutheria, Primates; Catarrhini, Cercopithecidae;

Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                               749 LAGGTDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSRFVTWI
                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
01-ERE-2003 (Rel. 14), Last annotation update)
Plasminogen precursor (EC 3.4.21.7).
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PIR; B32869; B30848.
HSSP; P00747; 1PMK.
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| RRINTS; PRO0725; PRINGE.
| RRINTS; PRO0189; KRINGLE.
| RRINTS; PRO10189; KRINGLE.
| RRINTS; PRO10189; KRINGLE.
| RRINTS; PRO0139; KRI, 4.
| RRINTS; SM00020; TYP_SPC; 1.
| RRART; SM00020; TYP_SPC; 1.
| RROSITE; PS00021; KRINGLE.1; 5.
| RROSITE; PS00134; TRYPSIN HIS; 1.
| RROSITE; PS0135; TRYPSIN HIS; 1.
| RROSITE; PS0135; TRYPSIN HIS; 1.
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| RROSITE; PS0135; TRYPSIN HIS; 1.
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ACTIVATION PEPTIDE.
PLASMIN SHORT FORM OF CHAIN A.
PLASMIN LIGHT CHAIN B.
KRINGLE 1.
KRINGLE 2.
KRINGLE 4.
KRINGLE 4.
KRINGLE 4.
KRINGLE 5.
SERINE PROTEASE.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
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CMAGA-AMINOCARBOXYLIC ACIDS.
OMEGA-AMINOCARBOXYLIC ACIDS.
OMEGA-AMINOCARBOXYLIC ACIDS.
OMEGA-AMINOCARBOXYLIC ACIDS.
OMEGA-AMINOCARBOXYLIC ACIDS.
FIBRIN.
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                                                                 InterPro; IPR003609; Pan app.
InterPro; IPR001966; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 5.
Pfam; PF000024; PAN; 1.
Pfam; PF00089; trypsin; 1.
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Chymotrypsin.
Kringle.
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                                               IPR003014; PAN.
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61
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InterPro; IPR001314;
InterPro; IPR000001;
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                                                                                                                                                                                                                                                    641
                                                                                                                                                                                                                                                                          229 QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ 288
                                                                                                                                                                                                                                                                                                                                               289 F----GISCEIIGFGKENSIDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAAD 344
                                                              99
                                                                                                                                                                                                                                       ----HCEIDKSKTCYEGNGH
                                                                                     NPDADKGPWCFTTDPSVRWEYCNLKKCSGTEGSVAAPPPVAQLPDAETPSEEDCMFGNGK
                                                                                                                 57 FYRGKASTDIMGRPCLPWNSAIVLQQIYHAHR----SDALQLGKHNYCRNPD-NRRRP
                                                                                                                                                                                            542 WCYT-INPRKLFDYCDVPQCAAS-----SFDCGKPQVEPKKCPGRVVGGCVAYPH
                                                                                                                                                                                                                      NQPWFAAIYRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT
                                                                                                                                        488 GYRGKKATTVTGTPCOEWAA----QEPHSHRIFTPETNPRAGLEK-NYCRNPDGDVGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schaller J., Straub C., Kaempier, V., Rickli E.E.;
Schaller J., Straub C., Kaempier, V. Rickli E.E.;
"Complete amino acid sequence of canine miniplasminogen.";
Protein Seq. Data Anal. 2:445-450(1989).
-!- FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS
A PROTEOLYTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOMENT, TISSUE REMOBELING, TUMOR INVASION,
AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE
GRAAFIAN FOLLICLE. IT ACTIVATES THE UROKINASE-TYPE PLASMINOGEN
ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH
AS CI AND CS. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSPONDIN,
I-AMININ AND VON WILLEBRAND FACTOR.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Lys-|-Xaa, higher selectivity than trypsin. Converts fibrin into soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREPTOKINASE.

MISCELLANEOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN MISCELLANEOUS: PTASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN IMMEDIATELY AFTER DISSOCIATION FROM THE CLOT.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
SIMILARITY: Contains at least 1 kringle domain.
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                 345 PQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                 Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOIND TO FIBRIN. ACTIVATED WITH UROKINASE AND HIGH CONCENTRATIONS OF
                                    64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENZYME REGULATION: CONVERTED INTO PLASMIN BY PLASMINOGEN
        ; Score 497; DB 1; Length 810;
; Pred. No. 9.2e-32;
46; Mismatches 165; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 20, Created)
(Rel. 20, Last sequence update)
(Rel. 40, Last annotation update)
(EC 3.4.21.7) (Fragment).
                                                             10 NCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQ----
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         21.6%;
                                    Matches 140; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                      Similarity
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01-NOV-1991
16-OCT-2001
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ID PLMN_CANFA
AC P80009;
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         Query Match
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CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHR----SDALQLGLGKHNYCRNP 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D-NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR---FKIIG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGDVNGPWCYT-MNQRKLFDYCDVPQCV-----STSFDCGKPQVEPKKCPGRVVG 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              107 GCVANPHSWPWQISLRTRYG----KHFCGGTLISPEWVLTAAHCLERSSRPASYKVILG- 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265 TELCAGNLAGGTDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSRFVT 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 CMFGNGKGYRGKKATTVMGIPCQEWAA-----QEPHRHSIFTPETNPQAGLEK-NYCRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GEFTTIENOPWFAAIYRRRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----AHKEVNLESDVQEIEVYKLFLEPTRA---DIALIKLSSP----AVITSKVIPACLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282 SMYNDPQF----GISCEITGFGKENSIDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338 KMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SRINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----PPNYVVADRTLCYİTGMGETQGT--YGAGLİKEAQLPVİENKVCNRYEYLNGRVKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREPTOKINASE-BINDING SITE (PROBABLE).
STREPTOKINASE-BINDING SITE (PROBABLE).
STREPTOKINASE-BINDING SITE (PROBABLE).
SITE OF SUBSTRATE SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHARGE RELAY SYSTEM (BY SIMILARITY)
CHARGE RELAY SYSTEM (BY SIMILARITY)
CHARGE RELAY SYSTEM (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                         PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
Hydrolase; Serine protease; Plasma; Glycoprotein; Fibrinolysis; Tissue remodeling; Blood coagulation; Kringle; Zymogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 333;
                                                                                                                                                                                                                                                                                                                                                                                                                           PLASMIN HEAVY CHAIN A.
PLASMIN LIGHT CHAIN B.
KRINGLE S.
KRINGLE S.
KRINGLE S.
KRINGLE S.
KRINGLE S.
KRINGLE S.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.5%; Score 494.5; DB 1;
34.8%; Pred. No. 5.3e-32;
ive 49; Mismatches 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY
CHARGE RELAY SY
CHARGE RELAY SY
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                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001001; Kringle.
InterPro; IPR0013966; Prothrombin.
InterPro; IPR001254; Ser_protease_fry.
Pfam; PF000631; Kringle; 1.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                      PRINTS; PRO1505; PROTHROMBIN.
ProDom; PD000395; Kringle; 1.
SMART; SM00130; KR; 1.
PROSITE; PS00020; Tryp_SPC; 1.
PROSITE; PS50070; KRINGLE 1; 1.
                                                                                                                                                                                                                                                                                                           PS50240; TRYPSIN DOM; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                   PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
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126; Conservative
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188
283
283
152
186
264
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333
83
333
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NON TER 1
CHAIN <1
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152
186
264
P00747;
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DISULFID
DISULFID
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                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            162
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CHARGE RELAY SYSTEM
                                                     21.4%; Score 493; DB 1;
35.1%; Pred. No. 7.2e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLAN BOVIN STANDARD; PRT; 812 AA. P06868; Q28162; O.J.AN-1988 (Rel. 06, Created) O.J.AN-1998 (Rel. 35, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) Plasminogen precursor (EC 3.4.21.7).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eur. J. Biochem. 149:267-278(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human and bovine plasminogen.";
Biochemistry 23:4243-4250(1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Int. Dairy J. 5:593-603(1995)
                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bovidae, Bovinae, Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     taurus (Bovine).
                         343 AA;
                                                                   Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasminogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                          WI 399
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                         SEQUENCE
 ACT SITE
                                                      Query Match
              NON TER
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A Schaller J., Straub C., Kampfer U., Rickli E.E.;
Schaller J., Straub C., Kampfer U., Rickli E.E.;

"Complete amino acid sequence of ovine miniplasminogen.";

Protein Seq. Data Anal. 5:21-25(1992).

-!- FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLCOD CLOTS AND ACTS AS A PROTECLYIC PACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOPMENT, TISSUE REMOBELING, TUMOR INVASION.

C BAND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE GRAAFIAN FOLLICLE. IT ACTIVATES THE URCKINASE-TYPE PLASMINOGEN ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH AS CI AND CS. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSPONDIN, LAMININ AND VON WILLEBBRAND FACTOR.

C -!- CATALYTIC ACTIVITY: Preferential cleavage: Lys-|-xaa > Arg-|-xaa; higher selectivity than trypsin. Converts fibrin into soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -:- ENZYME REGULATION: CONVERTED INTO PLASMIN BY PLASMINOGEN
ACTIVATORS. BOTH PLASMINOCEN AND ITS ACTIVATORS BEING BOUND TO
FIBERIN. CANNOT BE ACTIVATED WITH STREEPTOKINASE.
-!- MISCELLANEOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
INMEDIATELY AFTER DISSOCIATION FROM THE CLOT.
-!- SIMILARITY: Contains at least 2 kringle domains.
                                                                                                                                                                                    Ovis aries (Sheep).

Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
Bovidae, Caprinae, Ovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS, PROCO22; CLYMOTRYPAIN.
PRINTS, PROCO18; KRINGLE.
PRINTS, PROCO18; KRINGLE.
PROCONS, PROTHEOMBIN.
PRODOM; PROCO136; KR. Tingle; 1.
SMART; SMOOLO36; KR. Tingle; 1.
SMART; SMOOLO36; KR. Tingle; 1.
PROSITE; PSOCO10; KRINGLE 1; 1.
PROSITE; PSOCO10; KRINGLE 2; 1.
PROSITE; PSOCO14; TRYPSIN DOM; 1.
PROSITE; PSOCO134; TRYPSIN JIS; 1.
PROSITE; PSOCO135; TRYPSIN JIS; 1.
PROSITE; PSOCO135; TRYPSIN JIS; 1.
PROSITE; PSOCO135; TRYPSIN JIS; 1.
PROSITE; PSOCO135; TRYPSIN JIS; 1.
PROCITE; PSOCO135; TRYPSIN JIS; 1.
PROCITE; PSOCO135; TRYPSIN JIS; 1.
PROCITE; PSOCO135; TRYPSIN JIS; 1.
PROCITE; PSOCO135; TRYPSIN JIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Blood coagulation; Kringle; Zymogen; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SERINE PROTEASE.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                 15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Plasminogen (EC 3.4.21.7) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEAVY CHAIN A.
LIGHT CHAIN A.
KRINGLE 4.
KRINGLE 5.
                                                                                           343 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR0010001; Kringle.
InterPro; IPR0013066; Prothrombin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; Kringle; I.
Pfam; PF00089; trypsin; I.
                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
341
181
224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; B61545; B61545.
HSSP; P00747; 5HPG.
MEROPS; S01.233; -.
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41
114
181
224</pre>
399
                         326
                                                                                          PLMN SHEEP
P81286;
15-DEC-1998
X
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ACT_SITE
398
                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                              PLMN SHEEP
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CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAH----RSDALQLGLGKHNYCRNP 105
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                                                                                                                                                                                                                                                                                                                                                                                                 106 D-NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKPQCGQKTLRPR---FKIIG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGDVNGPWCYT-TNPRKLFDYCDIPQC-----ESSFDCGKPKVEPKKCPARVVG 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMYNDPQF----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTT 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338 KMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLP 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELCAGDLAGGTDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSTYVP 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222 SRINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLP 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S----PNYVVADKTVCYITGWGETQGT--FGVGRLKEARLPVIENKVCNRYEYLNGRVKS 274
                                                                                                                                                                                                                                                                                                                     68
                                                                                                                                                                                                                                                                                                             CMLGIGKGYRGKKATTVAGVPCQEWAA-----OEPHRHGIFTPETNPRAGLEK-NYCRNP
                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 706-812 FROM N.A.
MEDLINE-85023311; PubMed-6148961;
Malinowski D.P., Sadler J.E., Davie E.W.;
"Characterization of a complementary deoxyribonucleic acid coding for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Complete amino acid sequence of bovine plasminogen. Comparison with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 27-812, AND CARBOHYDRATE-LINKAGE SITES.
MEDILIBE-882203906; PubMed=3846532;
Schaller J., Moser Puw, Dannegger-Muller G.A.K., Rosselet S.J.,
Kampfer U., Rickli B.B.;
                                                                                                                                                               52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Liver;
Berglund L., Andersen M.D., Petersen T.E.;
"Cloning and characterization of the bovine plasminogen cDNA.";
                                                                           Length 343;
                                                                                                                                                          41; Mismatches 142; Indels
37662 MW; 8DF6EBA92D596EE0 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTIVATORS, BOTH PLASMINOGEN AND 1TS ACTIVATOR BEING BOUND TO FIBRIN. CANNOT BE ACTIVATED WITH STREPTOKINASE. PEPRIN. CANNOT BE ACTIVATED WITH STREPTOKINASE. PER N. H.LINKED GLYCAN CONTAIN N. ACETYLLACTOSAMINE AND SIALIC ACID. O-LINKED GLYCANS CONSIST OF GAL-GALNAC DISACCHRIDE WITH IS MODIFIED WITH UP TO 2 STALIC ACID RESIDUES (MICROHETEROGENEITY). MISCELLANEOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN IMMEDIATELY AFTER DISSOCIATION FROM THE CLOT. SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY. SIMILARITY: CONTAINS 5 Kringle domains.
              CARBUTDRAIDE LINAMOGE 311ES.

MEDLINE BRIS529; PubMede 356193;

Marti T., Schaller J., Rickli E.E., Schmid K., Kamerling J.P.,

Marti T., Schaller J., Rickli E.E., Schmid K., Kamerling J.P.,

Gerwig G.J., van Halbeek H., Vliegenhart J.F.;

Gerwig G.J., van Halbeek H., Vliegenhart J.F.;

Gerwig G.J., van Halbeek H., Vliegenhart J.F.;

Gerwig G.J., van Halbeek H., Vliegenhart J.F.;

Jenstinogen. Specificity in relation to sialylation and fucosylation patterns.";

Eur. J. Biochem. 173:57-63 (1988).

I. FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS A PROTECUTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOPMENT, TISSUE REMODELING, TUMOR INVASION,

AND INFLAMMATION; IN OUTLATION IT WEARENS THE WALLS OF THE GRAAFIAN FOLLICLE. IT ACTIVATES THE URCKIMSE-TYPE PLASMINGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH AS C1 AND C5. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSPONDIN, ILAMININ AND VON WILLEBRAND FACTOR.
CATALYTIC ACTIVITY: Preferential cleavage: Lys-|-Xaa > Arg-|-Xaa; higher selectivity than trypsin. Converts fibrin into soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R PRINTS; PRO0725; CIYANDTREEIN.
R PRINTS; PRO0725; CIYANDTREEIN.
R PRINTS; PRO0725; CIYANDTREEIN.
R PRINTS; PRO1605; PROTHROMBIN.
R PRON0035; KRINGLE.
R SWART; SM00130; KR; 5.
R SWART; SM00130; KR; 5.
R SWART; SM001473; PAN AP; 1.
R PROSITE; PS00101; KRINGLE 1; 5.
R PROSITE; PS00104; KRINGLE 1; 5.
R PROSITE; PS00134; TRYPSIN TOM; 1.
R PROSITE; PS00135; TRYPSIN TIS; 1.
R PROSITE; PS00135; TRYPSIN TIS; 1.
R PROSITE; PS00135; TRYPSIN TIS; 1.
R PROSITE; PS00135; TRYPSIN SER; 1.
R PROSITE; PS00135; TRYPSIN SER; 1.
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R PROSITE; PS00135; TRYPSIN SER; 1.
R PROSITE; PS00135; TRYPSIN SER; 1.
R PROSITE; PS00135
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLASMIN HEAVY CHAIN A. PLASMIN LIGHT CHAIN B. KRINGLE 1.
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; PAN.
InterPro; IPR003601; PAN.
InterPro; IPR003669; Pan app.
InterPro; IPR003669; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 5.
Pfam; PF00051; Kringle; 5.
Pfam; PF00089; trypsin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26
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SIGNAL
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THE LEAVE WAS A PRINCE OF THE PRINCE BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH
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50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD-NR 108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         591 KPHSWPWQVSLRRSSR-----HFCGGTLISPKWVLTAAHCLDNILALSFYKVILGAHNEK 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    226 SNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYN 285
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   646 VREQSVQEIPVSRLFREPSQA-----blallkl----skpalitkevipaclipppny 693
                                                                                                                                                                                                                                                                                                                                                                            485 CMIGTGKSYRGKKATTVAGVPCQEWAAQEPHQHSIFTPETNP-QSGL-ERNYCRNPDGDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                        543 NGPWCYTMNPRKPF-DYCDVPQC-----ESSFDCGKPKVEPKKCSGRIVGGCVS
                                                                                                                                                                                                                                                                                                                         39; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 POWKIDSCOGDSGGPLVCSLQGRMILIGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       751 LIGGTDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKRGVYVRVSPYVPWI 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 264:5957-5965(1989).
-!- FUNCTION: Apo(a) is the main constituent of lipoprotein(a)
(Lp(a)). It has serine proteinase activity and is able of autoproteolysis. Inhibits tissue-type plasminogen activator 1.
Lp(a) may be a ligand for megalin/Gp 330.
-!- SUBUNIT: Disulfide-linked to apo-B100. Binds to fibronectin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tomlinson J.E., McLean J.W., Lawn R.M.; "Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                        21.1%; Score 484.5; DB 1; Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1990 (Rel. 13, Created)
1-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Apolipoprotein(a) (EC 3.4.21..') (Apo(a)) (Fragment).
                                                                                                                                                                                                                                                                                                                       41; Mismatches 151; Indels
                                                                                                                                                                                                                                                          38A6AA691E220946 CRC64;
                                                                                         /FTIGACAR 000014.
O-LINKED (GALNAC. ..).
/FTIGACAR 000015.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                             SERINE PROTEASE.
N-LINKED (GLCNAC. . .).
                                                                                                                                                                                        N -> D (IN REF. 2).
Q -> H (IN REF. 2).
P -> L (IN REF. 2).
T -> R (IN REF. 3).
                                                                                                                                                                                                                                                                                                          Pred, No. 9e-31;
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KRINGLE 2.
KRINGLE 3.
KRINGLE 4.
KRINGLE 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=89174660; PubMed=2925643;
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                                                                                                                                                                                                                                                           91216 MW;
                                                                                                                                                                                                                                                                                                      34.98;
                                                                                                                                                                                                                                                                                                                         124; Conservative
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                                                                                                                                                           667 6
762 7
335 3
516 5
555
744 7
                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI TaxID=9544;
 192
282
384
384
315
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                                                                 DOMAIN
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                                                                                                                                            ACT_SITE
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208 DYPKKEDYIVYLGRSR---LNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSK 264
                                            J. Biol. Chem. 276:22200-22208(2001).
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"The mysteries of lipoprotein(a).";
Science 246:904-910(1989).
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                                                                                                                                                                                                                          381 ALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 330:132-137(1987).
                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SERINE PROTEASE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            resistance.";
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                                                                                                                                                                                                                                                                                                                                             APOA_HUMAN
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                                                                                                                                                                                                                                                                                                          RESULT 29
APOA HUMAN
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decorin (By similarity).

-!- PTM: N- and O-glycosylated (By similarity).

-!- DISEASE: Elevated plasma concentrations of apo(a) and its naturally occurring proteolytic fragments are correlated with naturally occurring proteolytic fragments are correlated with plasminogen kringles IV and V is thought to underlie the atherogenicity of the protein, because the fragments are competing with plasminogen for fibrin(gen) binding.

-!- MISCELLANEOUS: Apo(a) is known to be proteolytically cleaved, leading to the formation of the so called mini-Lp(a). Apo(a) fragments accumulate in arherosclerotic lesions, where they may promote thrombogenesis. O-glycosylation may limit the extent of proteolytic fragmentation (By similarity).

-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.

-!- SIMILARITY: Contains at least 10 kringle domains.
                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1123 DIGPWCFT---MDPSVRREYCNLTRCSDTEGTVVTPPTVIPVPSLEAPSEQASSSFDCGK 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108 RRRPWCYVQVGLKPLVQE--CMVHDCADGK------KPS--SPPEEL--KFQCGQ 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151 KTLRPR---FKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFI 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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SWART; SW00130; KR; 10.
PROSITE; PS00021; KRINGLE 1; 10.
PROSITE; PS50240; KRINGLE 2; 10.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN HIS; FALSE NEG.
PROSITE; PS00135; TRYPSIN SER; FALSE NEG.
Hydrolase; Serine protease; Lipid transport; Plasma; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.0%; Score 484; DB 1; Length 1420; 35.1%; Pred. No. 1.9e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 1.9e-30;
46; Mismatches 138; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SERINE PROTEASE.
MW; BE102949E03C5B0E CRC64;
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KRINGLE 2.
KRINGLE 3.
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KRINGLE 7.
KRINGLE 8.
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MEROPS; S01.226; -
InterPro; IPR0001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser protease T
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NON_TER 1 1

DOMĀIN 49 127 KRING
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PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 10.
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Pfam; PF00089; trypsin; 1.
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1282 -SRPAIITDKVIPACLPS----PNYVITAWTECYITGWGETQGT--FGAGLLKEAQLHVI 1334
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EGRCAQPSRTIQTICLPSMYNDPQF ----GTSCEITGFGKENSTDYLYPEQLKMTVVKLI
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MEDLINE=95002201; PubMed=7918682;
Scanu A.M., Pfaffinger D., Lee J.C., Hinman J.;
"A single point mutation (Trp72-->Arg) in human apo(a) kringle 4-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=96217891; PubMed=8642595; Mikol V., Lograsso P.V., Boettcher B.R.; Crystal structures of apolipoprotein(a); kringle IV37 free and complexed with 6-aminohexanoic acid and with p-aminomethylbenzoic acid: existence of novel and expected binding modes."; J. Mol. Biol. 256:751-761(1996).
                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINES-88039109; PubMed=3670400;
MCLean J.W., Tomlison J.E., Kuang W.-J., Eaton D.L., Chen E.Y.,
Fless G.M., Scanu A.M., Lawn R.M.,
"CDNA sequence of human apolipoprotein(a) is homologous to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=90076123; PubMed=2531657;
Salonen E.-M., Jauhiainen M., Zardi L., Vaheri A., Ehnholm C.;
"Lipoprotein(a) binds to fibronectin and has serine proteinase activity capable of cleaving it.";
EMBO J. 8:4035-4040(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21303595; PubMed=11294842; Garner B., Merry A.H., Royle L., Harvey D.J., Rudd P.M., Thi "Structural elucidation of the N- and O-glycans of human apolipoprotein(a): role of o-glycans in conferring protease
                                                                                                                                                                                                                                                                                                     01.AVG-1988 (Rel. 08, Created)
1.AVG-1988 (Rel. 08, Laxt sequence update)
15.5EP-2003 (Rel. 42, Last annotation update)
Apolipoprotein(a) precursor (EC 3.4.21.-) (Apo(a)) (Lp(a)).
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PER 1711; 11-JUN-02.

PER 1711; 11-JUN-02.

PER 1 INTY; 18-MAY-99.

PER 1 INTY; 18-MAY-99.

PER 2 INTY; 18-MAY-99.

PER 3 INTY; 18-MAY-99.

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PER 5 INTERPRO; 1PR001314; Chymotrypsin.

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PER 5 INTY; PR00122; CHYMOTRYPSIN.

PER 6 INTY; PR00132; CHYMOTRYPSIN.

PER 7 PR00131; REINGLE.

PER 5 PR00131; REINGLE.

PER 5 PR00131; REINGLE.

PER 5 PR00131; TRYPSIN LIS; 1.

PROSITE; PS00131; TRYPSIN LIS; 1.

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-I-MISCELLAMBROUS: Apo(a) is known to be proteolytically cleaved, leading to the formation of the so called mini-lp(a). Apo(a) fragments accumulate in atherosclerotic lesions, where they may promote thrombogenesis. O-glycosylation may limit the extent of proteolytic fragmentation.
-I-SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
                                                                                                                pTW: N- and O-glycosylated. The N-glycans are complex biantennary structures present in either a mono- or disalylated state. The O-glycans are mostly (80%) represented by the monosialylated core type I structure, NeuNAcalpha2-3Galbeta1-3GalNAc, with smaller amounts of disialylated and non-sialylated O-glycans also
associated with a lysine binding defect in Lp(a).";
Biochim. Biochim. 45.04 1227.44-45(1994).
-!- FUNCTION: Apo(a) is the main constituent of lipoprotein(a)
(Lp(a)). It has serine proteinase activity and is able of
autoproteolysis. Inhibite tissue-type plasminogen activator 1.
Lp(a) may be a ligand for megalin/Gp 330.
-!- SUBUNIT: Disulfide-linked to apo-B100. Binds to fibronectin and
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                                                                                                                                                                                                                                                                                                                                                           Pocrafehar M., Hellman L.;

"Cloning and structural analysis of leydin, a novel human serine
protease expressed by the Leydin, ells of the testis.";

Eur. J. Biochem. 261:244-250(1999).

-!- FUNCTION: PLAYS A ROLE IN NEURONAL PLASTICITY AND THE PROTEOLYTIC
ACTION MAY SUBSERVE STRUCTURAL REORGANIZATIONS ASSOCIATED WITH
LEARNING AND MEMORY OPERATIONS (BY SIMILARITY).

-!- SUBCELLULAR LOCATION: Secreted.

-!- TISSUE SPECIFICITY: Brian and Leydig cells of the testis.

-!- SIMILARITY: Centains 1 kringle domain.

-!- SIMILARITY: Contains 4 SRCR domains.
                                                                                                                                                                                                                                                          Proba K., Gschwend T.P., Sonderegger P.; "Cloning and sequencing of the cDNA encoding human neurotrypsin."; Biochim. Biophys. Acta 1396:143-147(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hydrolase; Serine protease; Glycoprotein; Kringle; Repeat; Signal.
                                                                                                                                           Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                      NETR HUMAN STANDARD; PRT; 875 AA.
P56730; Q9UP16;
30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Neurotrypsin precursor (EC 3.4.21.-) (Motopsin) (Leydin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR01190; Srcr_receptor.
Pfam; PF00530; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                                MEDLINE=99203523; PubMed=10103056;
                                                                                                                                                                                                                               TISSUE=Brain;
MEDLINE=98201705; PubMed=9540828;
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PROSITE; PS50287; SRCR_2; 4.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00020; Tryp SPc; 1,
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL, AJ001531; CAA04816.1; -. EMBL, AF077298; AAD25919.1; -. HSSP; P00763; 1DPO. Genew, HGNC:9477; PRSS12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRO0722; CHYMOTRYPSIN.
PRINTS; PRO0258; SPBRACTRCPTR.
ProDom, PD000395; Kringle; 1.
SMART; SM00130; KR; 1.
SMART; SM00202; SR; 4.
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SEQUENCE OF 615-875 FROM N.A.
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            RESULT 30
NETR_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     585 GRHN-CRHSEDAGVICDYF------GKKASGNSNKESLSSVCGLRLLH 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          686 RSYAVRVGDYHTLVPEEFEEBIGVQQIVIHREYRPDRSDY--DIALVRLGGPEEQCARFS 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             273 RTIQTICLPSMYNDPQ-FGTSCELTGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYY 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332 GSEVTTKMLCAAD--PQWKTDSCQGDSGGPLVCSLQGR-MTLTGIVSWGRGCALKDKPGV 388
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          626 RRQKRIIGGKNSILRGGWFWQVSIRLKSSHGDGRILCGATLLSSCWVLTAAHCFKRYGNST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525 CDDGWTDKDAAVICRQLGYKGPARARTWAYFGEGKGPIHVDNVKCTGNERSLADCIKQDI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              744 SHVLPACLPLWRERPQKTASNCYITGWG---DTGRAYSRTLQQAAIPLLPKRFCEE--RY
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N-LINKED (GLCNAC. .) (POTENTIAL).
A -> V (IN REF. 2).
V-Y (IN REF. 2).
VVY -> AAL (IN REF. 2).
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CHARGE RELAY SYSTEM.
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CHARGE RELAY SYSTEM.
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                                                                         SRCR 1.
SRCR 2.
SRCR 3.
SRCR 4.
SERINE PROTEASE.
POTENTIAL.
NEUROTRYPSIN.
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Job time : 15.2061 secs
                                       PRO-RICH.
                                                       KRINGLE.
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Matches 130; Conservative
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Q9xr70 oryctolagus
Q9xr70 oryctolagus
Q9xr70 oryctolagus
Q8c612 mus musculu
Q91xp2 mus musculu
Q8mkbl oryctolagus
Q8eq23 sus scrofa
Q9bzwl homo sapien
Q8cse8 homo sapien
Q8vcs4 mus musculu
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Q9tva8 bos taurus
O35727 mus musculu
Q8kOd2 mus musculu
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Q8mhy7 oryctolagus
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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## ALIGNMENTS

DE QUANTIO

DE QUALLO

DE GAMILO

DE GAMILO

DE COCT-2002 (TERMEIRE1. 22, Last sequence update)

DE OL-CCT-2002 (TERMEIRE1. 22, Last sequence update)

DE OL-CCT-2002 (TERMEIRE1. 22, Last sequence update)

DE OL-CCT-2002 (TERMEIRE1. 22, Last sequence update)

DE OTOCHIOGUS CURIDINEL. 22, Last sequence update)

DE OTOCHIOGUS CURIDINEL. 22, Last sequence update)

CN KINGLE CONTROLL CONTROL

28 80 118

298 320

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201 RHRGGSUTYVCGGSLISPCWVVSATHCFINHQKKEDYIVYLGRSRLNSMTPGEMKFEVEQ 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299 GKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGG 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 SNELHQV--PSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59 RGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              179 RHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              239 LILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                261 LILHBGYRADTLAHHNDIALLKILSNNGQCAQPSRSIQTICLPPWNADPNFGTSCEITGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          321 GKENSTDYLYPEQLKMTVVKLVSYQECQQPHYYGSEVTTKMLCAADPQWETDSCQGDSGG
PRINTS; PRO0018; KRINGLE.

ProDom; PRO00395; Kringle; 1.

SMART; SM00130; KR; 1.

PROSITE; PS00022; EGF 1; 1.

PROSITE; PS00021; KRINGLE 1; 1.

PROSITE; PS50040; TRYPSIN DOM; 1.

PROSITE; PS00134; TRYPSIN DOM; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

GlyCOPICHEIL; Hydrolase; Klinase; Kringle; Protease, Serine protease.

SEQUENCE 433 AA; 48444 MW; 6DD35A371010A6EE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           359 PLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             381 PLVCSVQGRMTLTGIVSWGRGCALKNKPGVYTRVSRFLPWIRSHIGEENGLAL 433
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-NON-1999 (TrEMBLrel. 23, Last annotation update)
Urokinase-type plasminogen activator (Fragment).
07yctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                     Length 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -:- SIMILARITY: BELONGS TO TEPTIDASE FAMILY S1.
-:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-:- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
HSSP; AF097647; AAD39351.1; -.
HSSP; SP0749; 1EJN.
                                                                                                                                                                                                                                                                                                                                                                                              83.4%; Score 1918; DB 6;
83.5%; Pred. No. 1.6e-176;
iive 25; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; kringle; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 83.5
Matches 345, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGG 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  380
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         81 RGKANTDIMDRPCLAWNSANVLTKTYHAHRPDALQLGLGKHNYCRNPDHQRRPWCYVQVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFK1IGGEFTTIENQPWFAAIYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCELTGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321 GKENSTDYLYPEQLKMTVVKLVSYQECQQPHYYGSEVTTKMLCAADPQWETDSCQGDSGG
                                                                                                                                                                                                                                                                                                                                      21 SHELHGVSDASNCGCLNGGTCVTYXYPSNIWRCNCPKKKFQGEHCEIDTLKTCYHGDGHSY
                                                                                                                                                                                                                                                                                                       1 SNELHQV--PSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
      PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_ESF; 1.
Glycoprotein; Hydrolase; Kinase; Kringle; Protease; Serine protease.
SEQUENCE 433 AA; 48375 MW; 65E64F36415549B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381 PLVCSVQGRMTLTGIVSWGRGCALKNKPGVYTRVSRFLPWIRSHIGEENGLAL 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Lagomorpha, Leporidae, Oryctolagus.
NCBI_TaxID=9986;
                                                                                                                                                                                                                                                  7
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                                                                                                                                                                                    Length 433;
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Sugiki M., Yoshida E., Anai K., Maruyama M.;
Submitted (APR-2001) to the BMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                    83.6%; Score 1923; DB 6;
83.8%; Pred. No. 5.3e-177;
iive 25; Mismatches 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     433
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                Best Local Similarity 83.8
Matches 346; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
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                                                                                                                                                                                    Query Match
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Q8MHY7
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PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
EGF-like domain; Glycoprofein; Hydrolase; Kringle; Protease;
                                                                                                                                                                                                                                                      PWCYVQVGLKPLVQECMVHDCADG-----
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STRAIN-C57BL/6J; TISSUB-Ovary;
MEDLINE-22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389 YTRVSHFLPWIRSHTK 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||:|::| ||| : :
500 YTKVTNYLDWIRDNMR 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI TaxID=10090;
                                                      Serine protease
SEQUENCE 516
                                                                                                                                                                                                  51
                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                    111
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                                                                                                                                                                                                                                                                                                       135
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QBCGL2;
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                                                                                                                                                                                                                                                                                        120 YVCGGSLISPCWVVSATHCFINHQKKEDYIVYLGRPRLNSMTPGEMKFEVEQLILHEGYR 179
                                                                                                                                                                                                                         67 MGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQEC 126
                                                                                                                                                                                                                                                                         127 MVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVT 186
                                                                                                                                                                                                                                                                                                                             YVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYS 246
                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                          Gaps
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMORKPSIN.
PRODOM; PD000395; Kringle; 1.
SMART; SM00130; Kringle; 1.
SMART; SM00120; Tryp SPc; 1.
PROSITE; PS00021; KRINGLE; 1; 1.
PROSITE; PS00134; KRINGLE; 1; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS0134; TRYPSIN HIS; 1.
RQSITE; PS0134; TRYPSIN HIS; 1.
NON_TER 214 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                 .,
,
                                                                                                                                                                      Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Skin;
Strausberg R.;
Strausberg R.;
Strausberg R.;
Strausberg R.;
Strausberg R.;
Strausberg R.;
Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
EMBL; BC00795; AAH02795.1; -.
INCEPPO: JPR006129; AGP like.
InterPro: JPR006139; AGP like.
InterPro: JPR006210; EGF.
InterPro: JPR006210; EGF.
InterPro: JPR006210; Kringle.
InterPro: JPR001210; Kringle.
R Pfam; PF00008; Kringle; 2.
R Pfam; PR00015; Kringle; 2.
R Pfam; PR00015; Kringle; 2.
R Pfam; PR00019; Kringle; 2.
R PRINTS; PR00019; KRINGLE.
R PRINTS; PR00191; KRINGLE.
R PRINTS; PR00191; KRINGLE.
                                                                                                                                                                                              22; Indels
                                                                                                                                            214 AA; 24314 MW; 69975C41C32B0D7E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                      DB 6;
                                                                                                                                                                                                                                                                                                                                                                                           180 ADTLAHHNDIALLKILSNNGQCAQPSRSIQTICLP 214
                                                                                                                                                                                                                                                                                                                                                                              247 ADTLAHHNDIALLKIRSKEGRCAOPSRTIQTICLP 281
                                                                                                                                                                    42.7%; Score 982.5; DB 6
82.8%; Pred. No. 1.3e-86;
iive 14; Mismatches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similar to plasminogen activator, tissue Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probon, PD000395, Kringle; 2.
SWART; SW00181; EGF; 1.
SWART; SW00130; KR; 2.
SWART; SW00020; Tryp SPc; 1.
PROSITE; PS00022; EGF 1; 1.
PROSITE; PS01186; EGF 2; 1.
PROSITE; PS01019; KRINGLE 1; 2.
PROSITE; PS00010; KRINGLE 2; 2.
                                                                                                                                                                                              Matches 178; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI TaxID=9606;
                                                                                                                                                                                                                                                                                                                              187
                                                                                                                                            SEQUENCE
                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9BU99;
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322 LTVILGRIYRVVPGEBEQKFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSSRCAQESSV 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRR 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----KKPS-------SPPEELK-------FQCG-QKTLRP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      156 RFKIIGGEFTTIENQPWFAAIYRRH-RGGSVTYVCGGSLISPCWVISATHCFIDYPKKED 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215 YIVYLGRSRLINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRT 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ::|:|||
380 VRTVCLPPADLQLPDWTECELSGYGKHEALSPPYSERLKEAHVRLYPSSRCTSOHLLNRT 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PWCYVFKAGKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGK 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275 IQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSE 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              335 VTTKMLCAAD-----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGV 388
                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I & II Team;
that RIKEN Genome Exploration Research Group Phase I & II Team;
60,710 full-length cDNRs.";
Nature 420:563-573 (2002)
BMB1, AK054349; BAC35743.1;
NON TER 231 231
SRQUENCE 231 AA; 25510 MW; 2558980A682737F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 ŚQEIHARFRRGARSYQGCSEPRCFNGGICQQALYFSDF-VCQCPEGFAGKCCEIDTRATC
                                                                                                                                                                                                           1 SNELH-----QVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTC
                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
                                                                                                                                          95;
                                                             Query Match 37.3%; Score 858.5; DB 4; Length Best Local Similarity 37.7%; Pred. No. 3.8e-74; Matches 187; Conservative 55; Mismatches 159; Indels
516 AA; 57370 MW; BAB31901FDC96800 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2003 (TYENBLrel. 23, Created)
01-MAR-2003 (TYENBLrel. 23, Last sequence update)
01-MAR-2003 (TYENBLrel. 23, Last annotation update)
Plasminogen activator (Fragment).
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                                                                                                                                                                                                                                                                                                                162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253 NSQALGLGRHNYCRNPDGDARPWCHVMKDRKLTWEYCDMSPCSTCGLRQYKRPQFR1KGG 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193 GKYTTEFCSTPACPKGKSEDCYVGKGVTYRGTHSLTTSQASCLPWNSIVLMGKSYTAWRT 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282 SMYNDPOF----GISCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVIT 337
                                                                                                                                                                               431 ----DPNLQLPDWTECELSGYGKHEASSPFFSDRLKEAHVRLYPSSRCTSQHLFNKTVTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      487 NMLCAGDTRSGGNQDLHDACQGDSGGPLVCMINKQMTLTGIISWGLGCGQKDVPGVYTKV
                                                                                                                                        3 ELHQVP----SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -------SPPEELK--------PQCG-QKTLRPRFKIIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163 EFTTIENQPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SRINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338 KMLCAADP-----QWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-0CT-2002 (TrEWBLrel. 22, Created)
01-0CT-2002 (TrEWBLrel. 22, Last sequence update)
01-0CT-2003 (TrEWBLrel. 22, Last sequence update)
1-0CT-2003 (TrEWBLrel. 23, Last annotation update)
Tissue-type plasminogen activator.
Oryctolagus cuniculus (Rabbit).
Oryctolagus cuniculus (Rabbit).
Mammalia; Butheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                         97;
   35.9%; Score 826.5; DB 11; Length 559; ilarity 35.7%; Pred. No. 5.1e-71; Conservative 65; Mismatches 155; Indels 97;
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SUGIKI M., Yoshida E., Anai K., Maruyama M.;
SUGIKI M., Yoshida E., Anai K., Maruyama M.;
SUGIKI M., Yoshida E., Anai K., Maruyama M.;
SUGIKI M., Yoshida E., Anai K., Maruyama M.;
SUGIKI M., SILONG TO PERPITDASE FAMILY SI.
C.-!- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
R. EMBL, AYO29518; AAK40240.1; -.
R. InterPro; IPR001314; Chymotrypsin.
R. InterPro; IPR0001314; Chymotrypsin.
R. InterPro; IPR000203; Fibrnctnl.
R. InterPro; IPR000001; Kringle.
R. InterPro; IPR0001254; Ser_protease_Try.
R. Ffam; PF00001; Kringle; 2.
R. Ffam; PF000019; Kringle; 2.
R. Pfam; PR00012; CHYMOTRYPSIN.
R. PRINTS; PR000125; KRINGLE.
R. PRODOM; PD0001395; KRINGLE.
R. PRODOM; PD0001395; KRINGLE: 2.
                                                                                                                                                                                                                                                                                                                                                                                                           119 LKPLVQECMVHDCADGKKPS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           547 INYLDWIHDNMKQ 559
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   Query Match
Best Local Similarity
Matches 176; Conserv
                                                                                                                                                                                                                                                                          59
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                                                                                                                                                                                                                                                                                                                                                                                                 HDCADGKKPSSPPBELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGS-VTY 187
                                                                                                                                                                                                89
                                                                                                                                                                        30 SNCGCQNGGVCVSYKYFSRIRRCSCPRKPQGEHCEIDASKTCYHGNGDSYRGKANTDTKG
                                                                                                                              SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strausberg R.; Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

Strausberg R.; Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

-: SIMILARITY: CONTAINS IN PRINTS FAMILY SI.

-: SIMILARITY: CONTAINS IN PRINTS ENGLISE FAMILY SI.

REMBL; BC011256; AAH11256.1; -..

MGD; MGI:976.10; Plat.

RICEPPO: IPR001314; Chymotrypsin.

RINTERPO: IPR000083; Fibrintenl.

RINTERPO: IPR000081; Fibrintenl.

RINTERPO: IPR000081; Fibrintenl.

RINTERPO: IPR000081; Fibrintenl.

RINTERPO: IPR0001264; Ser_protease_Try.

R Pfam; PF000081; Kringle.

R Pfam; PF000081; Kringle.

R Pfam; PR00018; Kringle.

R Pfam; PR00018; Kringle.

R PRINTS; RM0018; Kringle.

R RNINTS; RM0018; KRINGLE.

R SMART; SM0018; RRI.

R RNOSTTE; PS00186; EGF 1; 1.

R RNSTTE; PS00128; Tryp_SPC; 1.

R RNSTTE; PS00128; Tryp_SPC; 1.

R RNSTTE; PS00128; Tryp_SPC; 1.

R RNSTTE; PS00128; Tryp_SPC; 1.

R RNSTTE; PS00128; Tryp_SPC; 1.

R RNSTTE; PS00138; TRYPSIN HIS; 1.

R RNSTTE; PS00134; TRYPSIN HIS; 1.

R RNSTTE; PS00134; TRYPSIN HIS; 1.

R RNSTTE; PS00135; TRYPSIN HIS; 1.

R PROSTTE; PS00135; TRYPSIN HIS; 1.

R PROSTTE; PS00135; TRYPSIN HIS; 1.

R PROSTTE; PS00135; TRYPSIN HIS; 1.

R PROSTTE; PS00135; TRYPSIN HIS; 1.
                                                                      ä
   Length 231;
ch Similarity 71.5%; Score 842.5; DB 11; Length II Similarity 71.5%; Pred. No. 47.6-73; II 143; Conservative 23; Mismatches 33; Indels 143; Conservative 23; Mismatches 33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8CCEE2BDB94514D9 CRC64;
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similar to plasminogen activator, tissue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  559 AA; 63122 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
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Query Match
Best Local Similarity
Matches 143; Conserv
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SEQUENCE 559
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PWIRSHTK 404
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554 NWIRDNTR 561
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 TWSTTESGAQCVNWNSSWLALKPYSGRKPNALRLGLGNHNYCRNPDRDTKPWCYVFRAGT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199 YSPEFCSTPACSKEKNGNCYLGKGQAYRGTHSLTTSGASCLPWNSMLLVGEKYTARQSNA 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCG-Q 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KTLRPRFKIIGGEFTTIENQPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDY 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210 PKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FPQQKLRVILGRTYPLVSABEBQIFEVEQPILHERFDBGT--YDNDIALLKLKSTSGSCA 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QPSRTIQTICLPSMYNDPQFGTSCELTGFGKENSTDYLYPEQLKMTVVKLISHRECQQPH 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46 ------KSKTCYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         330 YYGSEVITIKMLCAADPQW-----KTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
R SMART; SM00181; EGF; 1.

R SMART; SM001058; FN1; 1.

R SMART; SM001020; TKP; 2.

SMART; SM001020; TKP; 5.

R PROSITE; PS01022; EGF=1; 1.

R PROSITE; PS01023; FIBRONECTIN 1; 1.

R PROSITE; PS01023; FIBRONECTIN 1; 1.

R PROSITE; PS00013; KRINGLE 1; 2.

R PROSITE; PS00134; TRYPENIN LEG; 1.

R PROSITE; PS00134; TRYPENIN LEG; 1.

R PROSITE; PS00135; TRYPENIN LEG; 1.

R PROSITE; PS00135; TRYPENIN LEG; 1.

R PROSITE; PS00135; TRYPENIN LEG; 1.

R PROSITE; PS00135; TRYPENIN LEG; 1.
                                                                                                                                                                                                                                                                                                                                           35.6%; Score 819; DB 6; Length 564;
35.7%; Pred. No. 2.8e-70;
ive 55; Mismatches 148; Indels 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                 5 HOVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEID--
                                                                                                                                                                                                                                                                                                   564 AA; 62726 MW; 459D8BAC6D4A937C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DVPGVYTKVVNYLGWIQOH 561
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SEQUENCE FROM N.A.
TISSUB=Enamel organ;
Ding Y., Xue J., Bartlett J.D.;
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01-JUN-2002 (TrEMBLrel. 21,
01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 35.79
Matches 178; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------ 94
                                                                                                                                                                                                                                                                               Serine protease.
SEQUENCE 564 7
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RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   343 ADPQW-----KTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77 QCHSVPVKSCSEPRCFNGGTCLQAIYFSDF-VCQCPVGFIGRQCBIDARATCYEDQGITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----CGQXTLR-PREKIIGGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    164 FITIENQPWFAAIY-RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               223 RINSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376 YRLVPGEEEQAFEVEKYIVHKEFDDDT--YDNDIALLQLKSDSLICAQESDAVRTVCLPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283 MYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89; Gaps
                                                      Length 562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
"T-plasminogen activator in tooth tissues.";
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
-- SINILIARITY: CONTAINS 2 KRINGLE DOMAINS.
EMBL; AF364605; AAM00297.1; --
HSSP; P00761; 1AN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
35.5%; Score 816.5; DB 6;
Best Local Similarity 35.2%; Pred. No. 4.8e-70;
Matches 172; Conservative 61; Mismatches 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 LKPLVQECMVHDCADGKKPSSPPEELKFQ----
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163

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A Bai X., Fu J., Wang W., Xi X., Ruan C.;

Toverexpression of the amino-terminal fragment of human urokinase-type plasminogen activator in breast cancer cells results in decreased trumor invasion, growth and angiogenesis.";

Lumor invasion, growth and angiogenesis.";

Lumor invasion, growth and angiogenesis.";

Lumor invasion, growth and angiogenesis.";

L. SIMILARITY: CONTAINS! RRINGLE DOWAIN.

PARE: AV020537, AAK38734.1; -

InterPro; IPR006209; BGF like.

RINGEPRO; IPR006210; IEGF.

RINGEPRO; IPR0006310; IEGF.

PR Ffam; PP00015; Kringle.

PR Ffam; PP00015; Kringle.

RINGREPROSONS RRINGLE.

ROODM; PD000130; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.

ROMART; SM00118; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81 KASTDIMGRECLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8VCS4;
Q8VCS4;
01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical (70.6 kDa protein.
Mus musculus (Mouse).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
                                                                                                                                                               01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Urokinase-type plasminogen activator amino-terminal fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 154;
                                                                                                                                                                                                                                                                                                                                                       Fu'J', Bai X., Ruan C.;
"Cloning and expression of the amino-terminal fragment of
"tokinase-type plasminogen activator";
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Butelo
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 778; DB 4; Length 15
Pred. No. 4.7e-67;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycoprotein, Kinase, Kringle.
SEQUENCE 154 AA; 17305 MW; A3CCF2FCFF505572 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   653 AA
      372 QKDVPGVYTKVTNYLDWIRDNMR 394
                                                                                                                                      01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last seq
01-MAR-2003 (TrEMBLrel. 23, Last ann
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PROSITE; PS00021; KRINGLE 1, 1.
PROSITE; PS50070; KRINGLE 2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141 LLVQECMVHDCADG 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 99.3°
Matches 133, Conservative
                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                          Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8VCS4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
28VCS4
1D Q8VCS
AC Q8VCS
DT 01-MA
DT 01-MA
DT 01-MA
DE Hypot
OS Mus m
OC Mamma
                                                             RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90 DALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPBELKFQCG 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88 SAQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCS-----TCG 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :: :|:|:| || | | : || || : :|
134 LRQYSQPQFRIXGGLFADIASHPWQAAIFAKHEESPGERFLCGGILISSCWILSAAHCFQ 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150 -QKTLRPRFKIIGGEFTTIENQPWFAAIYRRH-RGGSVTYVCGGSLISPCWVISATHCFI 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208 DYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGR 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           268 CAQPSRIIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQ 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252 CAQESSVVRTVCLPPADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTS 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328 PHYYGSEVTTKMLCAAD----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCA 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      312 QHLLNRTVTDNMLCAGDTRSGGPQANLHDACQGDSGGPLVCLNDGRMTLVGIISWGLGGG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ||| | : : || || | : : || 33 WCNS----GRAQCS-EGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNP 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30 WCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRS 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29; Gaps
                                                                                                                          Homo sapiens (Human) Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                             R HASEY; MOUDOU; TEXAC.

R INTERPRO; IPR000083; Fibrnctn1.

R INTERPRO; IPR000083; Fibrnctn1.

R INTERPRO; IPR000001; Kringle.

R INTERPRO; IPR0000154; Ser_protease_Try.

Pfam; PF00089; trypsin; 1.

R Pfam; PF00089; trypsin; 1.

R PRINTS; PR0018; KRINGLE.

R PRODOM; PR0018; KRINGLE.

R PRODOM; PR00089; FN1; 1.

R SMART; SM00130; KR; 1.

R SMART; SM00130; KR; 1.

R SMART; SM00120; Tryp SPc; 1.

R R SMART; SM00120; Tryp SPc; 1.

R R SMART; PS0121; KRINGLE 1; 1.

R PROSITE; PS0121; KRINGLE 2; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0135; TRYPSIN SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34.1%; Score 784.5; DB 4; Length 395; 42.0%; Pred. No. 3.7e-67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42.0%; Pred. No. 3./e-b/,
live 49; Mismatches 144; Indels
                                                                                                                                                                                                                                                   Dou D.;
"A brain-type plasminogen activator.";
"A brain-type plasminogen activator.";
Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOWAIN.
EMBL; AFZ60825; AAKI1956.1; --
HSSP, P00750; 1PK2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44323 MW; 3FBD4A2F0B7C11C8 CRC64;
                                                     Created)
Last sequence update)
Last annotation update)
                                                                                                                  Neonatal thrombolytic agent alpha-form (Fragment)
                    395 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382 LKDKPGVYTRVSHFLPWIRSHTK 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ...
                                                     01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 161; Conservative
                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    395 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON TER
SEQUENCE
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Q9BZW1
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341 CAADPQWKTDSCOGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIR 400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                     Sus scrofa (Pig).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30.1%; Score 693.5; DB 6; Length 616; 35.3%; Pred. No. 4e-58; Live 61; Mismatches 159; Indels 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Takahashi T., Kihara T.;
"Porcine liver factor XII.";
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
BMBL, PRO0753; BAA37148.1; -.
MEROPS; S01.211; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    616 AA; 68012 MW; 4CSFE3D71EBBD1A9 CRC64;
                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                  616 AA
                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                             01-MAY-1999 (TrEMBLrel. 10, 01-MAY-1999 (TrEMBLrel. 10, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity Adatches 161; Conservative
                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                             401 SHTK 404
                                                                                                                  641 DRIR 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Serine protease
SEQUENCE 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                        RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         239 HTACLSSPCLNGGTC------HLIVGTGTSVCTCPLGYAGRFCNIVPTEHCFLGNGT 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQ 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          290 EYRGVASTAASGLSCLAWNSDLLYQELHVDSVAAAVLGLGPHAYCRNPDKDERPWCYVV 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  117 VGLKPLVQECMVHDCAD-GKKPSSPPEEL------KFQCGQK-----TLRPRFKII 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             407
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462 QHFFNRTTDVTQTFGIEKYVPYTLYSVFNNNH-DLVLIRLKKKGERCAVRSQFVQPICL 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEAGSSFPTGHKCQIAGWGHMDENVSSYSNSLLEALVPLVADHKCSSPEVYGADISPNML 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   350 KDNALSWEYČRLTAČESLARVHŠQSPEILAALPESAPAVRPTČGKRHKKRTFLKPR--II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 HQVPSNCDCLNGGTCVSNKYFSNIHW-----CNCPKKFGGQHCEIDKSKTCYEGNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; POOLES; FIBRONECTIN 1; 1.
PROSITE; PSO0023; FIBRONECTIN 2; 1.
PROSITE; PSO0021; KRINGLE 1; 1.
PROSITE; PSO0070; KRINGLE 2; 1.
PROSITE; PSO10134; TRYPSIN DOM; 1.
PROSITE; PSO1134; TRYPSIN DOM; 1.
PROSITE; PSO01134; TRYPSIN BER; 1.
Hypothetical protein; EGF-like domain; Glycoprotein; Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 653;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31.6%; Score 726; DB 11; Length 65: 37.3%; Pred. No. 3.2e-61; ive 57; Mismatches 167; Indels
                                                                     Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS I KRINGLE DOMAIN.
EMBL; BC019376; AAH19376.1; -.
HSSP; P00761; IANI.
INTERPRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kringle; Protease; Serine protease.
SEQUENCE 653 AA; 70553 MW; FE18D90174ED6FDD CRC64;
                                                                                                                                                                                                          InterPro; IPR000742; BGF 2.
InterPro; IPR0006209; BGF 2!
InterPro; IPR0006309; Fibrnctn1.
InterPro; IPR000610; FN Type_II.
InterPro; IPR000610; IEGF.
InterPro; IPR000011; Kingle.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PRO0018; KRINGLE.
ProDom; PD000995; FN Type II; 1.
ProDom; PD000395; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                    Pfam; PF00008; EGF; 2. Fam; PF00039; En1; 1. Pfam; PF00039; En1; 1. Pfam; PF000051; kringle; 1. Pfam; PF00089; kringle; 1. Pknirs; PR00092; krypsin; 1. Pknirs; PR00122; CHYMOTESIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00181; EGF; 2.
SMART; SM00181; EGF; 2.
SMART; SM00130; KR; 1.
SMART; SM00130; KR; 1.
PROSITE; PS01186; EGF_1; 2.
PROSITE; PS01186; EGF_2; 1.
PROSITE; PS01253; FIBRONECTIN_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57
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Matches
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SHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQG---RMTLTGIVSWG 377
                                                                                                                          R-SKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLNGGKCVTYXYFSNIQRCSCPKKFQGEHCEIDTSKTCYQGNGHSYRGKANRDLSGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73 PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Cetartiodactyla, Ruminantia, Pecora, Bovoldea,
Bovidae, Bovinae, Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Skeletal muscle;
MEDLINE=210711388; PubMed=11204721;
MEDLINE=210711388; PubMed=11204721;
MEDLINE=200711388; PubMed=11204721;
"Coordinate expression of matrix-degrading proteinases and activators and inhibitors in bovine skeletal muscle.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.4%; Score 677; DB 6; Length 15
73.9%; Pred. No. 2.7e-57;
ive 15; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17858 MW; A768D6C72C1FBFB7 CRC64;
                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 DGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIEN 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Anim. Sci. 79:94-107(2001).
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
BEBL; AFP44761, AAD30301.1; -.
INCEPPO: 100749; 1URK.
INTERPO: 1PR006209; EGF like.
INTERPO: 1PR006209; Kringle.
Fram. PF00015; Kringle.
ProDom; PF00018; KRINGLE.
ProDom; PF00018; KRINGLE.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS00022; EGF 1; 1.
PROSITE; PS00021; KRINGLE 1; 1.
                                                                                                                                                                                                                                                                               ¥.
                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence up
01-MAY-2003 (TrEMBLrel. 23, Last annotation
Urokinase plasminogen activator (Fragment).
Bos taurus (Bovine).
                                                                                                                                                                      RGCALKDKPGVYTRVSHFLPWIRSHT 403
                                                                                                                                                                                     | ::|||||| |:::| ||| || seggdringeri
                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glycoprotein; Kinase; Kringle.
NON TER 157
NON TER 157
SEQUENCE 157 AA; 17858 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 73.9
Matches 116; Conservative
                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9913;
                                                                                                                                                                     378
                                                                          468
                                                                                                        321
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                                                                                                                                                                                                                                                                            Q9TVA8
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                                                                                                                                                                                                                                                RESULT
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                                                                                                                                                                                                                                                                                                         LSGAPCQPWAS----EATYWNWTAEQALNWGLGDHAFCRNPDNDTRPWCFVWRGDQLSWQ 288
                                                                                                                                                                                                                                              DIALLKIR-SKEGRCAQPSRTIQTICLP---SMYNDPQFGTSCEITGFGKENSTDYLYPE 310
                                                                                                                                                                                                                                                                                                                                                                     TWGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQ 124
                                                                                                       ----SSPPEEL- 144
                                                                                                                                   YCRLARCQAPIGEAPPILTPTQSPSEHQDSPLLSREPQPTTQTPSQNLTSAWCAPPEQRG 348
                                                                                                                                                                   -----KFQCGQKTLRPRF----KIIGGEFTTIENQPWFAAIYRHRGGSVTYVCGGSLI 194
                                                                                                                                                                                                                         SPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHN 254
                                                                                                                                                                                                                                                                                                                                                311 QLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVC---SLQGR 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----ADGKKPSSPPEEL 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        296 QIPTQAAPPIPVSPRLHVPLMPAQPAPPKPQPTTRTPPQSQTPGALPAKREQPPSLTRNG 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145 KFQCGQ---KTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVIS 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202 ATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKI 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                || | : || : | : | : | : | PWAS----EATYRNVTABQARNWGLGGHAFCRNPDNDIRPWCFVLNRDRLSWEYCDLAQC
                                                                                                                                                                                              349 PLPSAGLVGCGQR-LRKRLSSLNRİVGGLVALPGAHPYIAALYWGQN-----FCAGSLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

Wada H., Nishioka J., Nakatani K., Kasai Y., Abe Y., Nobori T.,

"Molecular chracterization of coaggulation factor XII-Mie.",

Submitted (NOV-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29.9%; Score 689; DB 4; Length 615; 34.3%; Pred. No. 1.1e-57; ive 59; Mismatches 164; Indels '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AB099845; BAC23095.1; -. SEQUENCE 615 AA; 67735 MW; 030508870A0C7EDB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. 23, Created)
(TrEMBLrel. 23, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                             MTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                        ECMVHDCAD--GKKP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Coagulation factor XII-Mie.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 34.3
Matches 153; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                           368
                                              99
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16;
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                                                                                                  160 IGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYL 219
                                                                                                                                             CLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK 338
                                                                                                                                                                                                                      MLCAADPQWKTDSCQGDSGGPLVC---SLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHF 395
                                                                                                                                                                                                                                           |||| : ||:|||||||||||| : ::|| |::|| ||::|| ||::|| |::|| |::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72
                          468 CLPSGAAPPSETVLCEVAGWGHQLEGAEEYSTFLQEAQVPFIALDRCSNSNVHGDAILPG
                                                                         GRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIR-SKEGRCAQPSRTIQTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13 CINGGICVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS01186; EGF_2; 2.
PROSITE; PS00021; KRINGLE_1; 1.
PROSITE; PS50070; KRINGLE_2; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_DIS; 1.
PROSITE; PS00135; TRYPSIN_DIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hypothetical protein; EGF_like_domain; Glycoprotein; Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11; Length 517;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.3%; Score 674.5; DB 11; Length 38.0%; Pred. No. 2.2e-56; ive 58; Mismatches 164; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strausberg R.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kringle, Protease, Serine protease.
SEQUENCE 517 AA, 57326 MW, 3855A42035A5EA59 CRC64,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     517 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-MAR-2003 (TrEMBLrel. 23, Hypothetical protein. Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 159; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                            396 LPWIRSH 402
                                                                                                                                                                                                                                                                                                                              LAWIOKH 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IISSUE=Kidney;
                                                                         220
                                                                                                                                               279
                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                     Q8K0D2
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Q8K0D2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73 PWNSAIVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 RW----TVEATYRNMTEKQALSWGLGHHAFCRNPDNDTRPWCFVWSGDRLSWDYGGLEQC 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ------ADGKKPSSPP--------EELKFQCGQ---KTLRPRFKI 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QTPTFAPLVVPESQEESPSQAPSLSHAPNDSTDHQTSLSKTNTMGCGQRFFKGLSSFMRV 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDIMGRPCL 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                    Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R SMART; SM00181; EGF; 1.

R SMART; SM00058; FN1; 1.

R SMART; SM00059; FN2; 1.

SMART; SM00059; FN2; 1.

R PROSITE; PS00120; Tryp_SPc; 1.

R PROSITE; PS01186; EGF_2; 1.

R PROSITE; PS00021; FIBRONECTIN_1; 1.

R PROSITE; PS00021; FIBRONECTIN_2; 1.

R PROSITE; PS00013; FIBRONECTIN_2; 1.

R PROSITE; PS00014; FRINGLE_1; 1.

R PROSITE; PS00134; TRYPSIN DOM; 1.

R PROSITE; PS00134; TRYPSIN DOM; 1.

R PROSITE; PS00134; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 597;
                                                                                                                                                                                                                                           Legentrial Schwager S., Engel W.;
Schloesser M., Schwager S., Engel W.;
Schloesser M., Schwager S., Engel W.;
Schloesser M., Schwager S., Engel W.;
Schloesser M., Schwager S., Engel W.;

-: SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

R. EMBL; X99571; CAA67891.1; -.

R. HSSP; POOV661; LAQ7.

R. MGD, MGI:1891012; F12.

R. InterPro; IPR001314; Chymotrypsin.

R. InterPro; IPR0001314; Chymotrypsin.

R. InterPro; IPR000139; File.

R. InterPro; IPR000183; Fibrnctn.

R. InterPro; IPR000183; Fibrnctn.

R. InterPro; IPR00019; F12.

R. InterPro; IPR00019; F11; I.

R. Pfam; PF00009; BGF; 2.

R. Pfam; PF00009; RGP; 1.

R. Pfam; PF000051; Kringle; 1.

R. Pfam; PF000081; Kringle; 1.

R. Pfam; PF000081; Kringle; 1.

R. Pfam; PF000081; Kringle; 1.

R. PRINTS; PR00012; Kringle; 1.

R. PRINTS; PR00121; Kringle; 1.

R. PRINTS; PR00131; Kringle; 1.

R. PRINTS; PR00131; Kringle; 1.

R. PRINTS; PR00131; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64; Mismatches 162; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               597 AA; 65638 MW; F3AC07C37D0C0FBA CRC64;
                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29.4%; Score 677; DB 11; 34.9%; Pred. No. 1.5e-56;
 597 AA
                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRODO18; KRINGLE.
ProDom; PD000995; FN Type II;
ProDom; PD000395; Kringle; I.
                                   05,
05,
23,
                                (TrEMBLrel. (TrEMBLrel. (TrEMBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 149; Conservative
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                  [1]
SEQUENCE FROM N.A.
                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serine protease
SEQUENCE 597
                                01-JAN-1998
01-JAN-1998
01-MAR-2003
                                                                                      Factor XII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
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                                                                                                                               YWNSHLLLQETYNMFMEDAETHGIAEHNFCRNPDGDHKPWCFVKVNSEKVKWEYCDVTVC 233
                                                                                                                                                                                                                                                         234 PVPDTP-NPVESLLEPVMELPGFESCGKTEVAEHAVKRIYGGFKSTAGKHPWQVSLQTSL 292
                                                                                                                                                                                                                                                                                                                                                                        293 PLTTSMPQG----HFCGGALIHPCWVLTAAHC-TDINTKHLKVV-LGDQDLKKTESHEQT 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQE-CMVHDC 131
                                                                                                                                                                                                                  132 ADGKKPSSPPEEL-----KFQ-CGQKTLRPRF--KIIGGEFTTIENQPWFAAIY--- 177
                                                                                                                                                                                                                                                                                                                                     ----RRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMK 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDP-QFGTS 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWK-TDS 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        517
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96425001; PubMed=8827452;
Choi-Miura N.H., Tobe T., Sumiya J., Nakano Y., Sano Y., Mazda T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
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TISSUE=Colon, and Kidney;

Strausberg R.;

Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.

-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

C. !- SIMILARITY: CONTAINS I KRINGLE DOMAIN.

REMBL; SA3182; AAB46909.1; -.

REMBL; BC031412; AAH31412.1; -.

REMBL; BC031412; AAH31412.1; -.

REMBL; SC031412; AAH31412.1; -.

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01-MAR-2003 (TTEMBLrel. 23, Last annotation update)
HGF activator like protein (Hyaluronan binding protein 2).
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InterPro; IPR001254; Ser protease Try.
Pfam; PF00008; BGF; 3.
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01-NOV-1996 (TrEMBLrel. 01,
01-MAR-2003 (TrEMBLrel. 23,
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CQNGATCSRHKRRSKF-TCACPDQFKGKFCEIG-SDDCYVGDGYSYRGKMNRTVNQHACL 216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73 PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPL-----VQEC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 WVHDCA-DGKKPSSPPEELK--FOCGOKTLRPR--FKIIGGEFTTIENQPWFAAIYRRHR 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182 GGSVT-----YVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMK 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                333 -SSLPLTISMPQGHFCGGALIHPCWVLTAAHC-TDI-KTRHLKVVLGDQDLKKEEFHEQS 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQF--GT 291
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      446 ECHISGWGVTETGK--GSRQLLDAKVKLIANTLCNSRQLYDHMIDDSMICAGNLQKPGQD 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277 SAQDVAYPEESPTEPSTKLPGFDSCGKTEIAERKIKRIYGGFKSTAGKHPWQASLQ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
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STRAIN=New Zealand White;
MEDLINE=99057575; PubMed=9837780;
Reno C., Boykiw R., Martinez M.L., Hart D.A.;
"Temporal alterations in mRNA levels for proteinases and inhibitors and their potential regulators in the healing medial collateral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordara, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39;
                                                                             Prodom; PD00035; Kringle; 1.
PROSITE; PS01186; EGF 1; 3.
PROSITE; PS01186; EGF 2; 2.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
EGF-like domain; Glycoprotein; Hydrolase; Kringle; Protease;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                               Serine protease.
SEQUENCE 560 AA; 62671 MW; 5C1907230784ACD4 CRC64;
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01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                               28.7%; Score 661.5; DB 4; ilarity 37.1%; Pred. No. 4.4e-55; Conservative 58; Mismatches 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochem. Biophys. Res. Commun. 252:757-763(1998)
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
EMBL; ARC95011; AAC95003.1; -.
HSSP; P00749; IBIN.
MEROPS; S01.231; -.
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Oryctolagus cuniculus (Rabbit).
Pfam; PP00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
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Best Local Similarity
Matches 155; Conserv
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PRELIMINARY;
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Q15146
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              172 WFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGE 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232 MKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGT 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 WFAAIYRRHRGGSVTYVCGGGLISPCWVVSATHCFINHQKKEDYIVYLGRSRLNSMTPGE 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=129/Sv;
Brathwaite M., Waeltz P., Qian Y., Dudekula D., Schlessinger
Nagaraja R.;
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EMBL; BC014773; AAH14773.1; --
EMBL; AF481053; AAM2156.1; --
                                                                                                                                                                                                                                                                                                                                                                                                       Score 585; DB 6; Length 128;
Pred. No. 1.6e-48;
6; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.;
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                   128 AA; 14328 MW; 1BC7ED30E071A06D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfiam; PP00089; trypsin; 1.
SMRIT; PR00722; CHYMOTRYESIN.
SMRRT; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS000134; TRYPSIN_DIS; 1.
Hydrolase; Kinase; Protease; Serine protease.
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InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001304; PAN.
InterPro: IPR0013966; Prothrombin.
InterPro: IPR001354; Ser_protease_Try.
InterPro: IPR001364; Ser_protease_Try.
InterPro: IPR001364; Ser_protease_Try.
InterPro: IPR001400; Somatotropin.
Pfam; PF00051; Kringle; 5.
Pfam; PF00089; trypsin; 1.
PRINTS; PR001919; KRINGLE.
PRINTS; PR01050; PROTHROMBIN.
PRODOM; PD000395; KRINGLE.
PRODOM; PD000395; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
25.4%;
Best Local Similarity 84.4%;
Matches 108; Conservative
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428 NPDGDKGPWCYTTDPSVRWEYCNLKRCSETGGSVVELPTVSQEPSGPSDSETDCMYGNGK 487
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169 NOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229 QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           693 YMVADRİICYİTGMGETQGİ - FGAGRİKBAQLPVİENKVCNRVEYLNNRVKSTELCAGQ 750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 FYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQ----LGLGKHNYCRNPD-NRRRP 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542 WCYT-INPRKLYDYCDIPLCASAS-----SFECGKPQVEPKKCPGRVVGGCVANPH 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    649 SDVQEISVAKLILE-----PINRDIALLKL----SRPATITDKVIPACLPS----PN 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289 F----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAAD 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 NCDCLNGGTCVSNKYPSNIHWCNCPK--KPGGQHCEI------DKSKTCYEGNGH 56
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Browne M.J., Chapman C.G., Dodd I., Carey J.E., Lawrence G.M.P.,
Mitchell D., Robinson J.H.;
"Expression of recombinant human plasminogen and aglycoplasminogen in
HeLa cells.";
                                                                                                                                                                                                                                                                                                                                                                              62; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 488 DYRGKTAVTAAGTPCQGWAA----QEPHRHSIFTPQTNPRAGLEK-NYCRNPDGDVNGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       345 PQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       751 LAGGVDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSRFVDWI 805
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                       Length 812;
PROSITE; PS50070; KRINGLE 2; 5.
PROSITE; PS00334; SOMATOTROPIN 2; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
GROSITE; PS00135; TRYPSIN SER; 1.
GROUPCLEIN; Hydrolaes; Kringle; Protease; Serine protease.
SEQUENCE 812 A4, 90781 MW; 24173260E6A2FFD2 CRC64;
                                                                                                                                                                                                                                                                                           21.8%; Score 501; DB 11; Length 81
32.5%; Pred. No. 2.2e-39;
tive 48; Mismatches 170; Indels
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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-!- SIMILARITY: CONTAINS 5 KRINGLE DOMAINS.
EMBL; M74220; AA336451.1; -
HSSP; P00747; 2PK4.
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InterPro; IPR001001; Kringle.
InterPro; IPR0030014; PAN.
InterPro; IPR003609; Pan.app.
InterPro; IPR00366; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; kringle; 5.
Pfam; PF00089; trypsin; 1.
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01-MAY-2000 (TrEMBLrel. 13, Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               378 RGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
       EMBL; AF029691; AAB97886.1;
HSSP; P00747; 2PK4.
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Matches 130; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQÜENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WCYT-TNPRKLYDYCDVPQCA---APS-----PDCGKPQVEPKKCPGRVVGGCVAHPH 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWPWQVSL--RTRFG--MHFCGGTLISPEWVLTAAHCLEKSPRPSSYKVILGAHQEVNLE 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NPDADKGPWCFTTDPSVRWEYCNLKKCSGTEASVVAPPPVVLLPDVETPSEEDCMFGNGK 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FYRGKASTDTMGRPCLPWNSATVLQQTYHAHR----SDALQLGLGKHNYCRNPD-NRRRP 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229 QGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQ 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHYQEIEVSRLFLEPT-----PRKDIALLKLSSP----AVITDKVIPACLPS----PN 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F----GTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAAD 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----HCEIDKSKTCYEGNGH 56
R PRINTS; PRO0722; CHYMOTRYPSIN.
R PRINTS; PRO01205; PROTHROMEN.
R PRINTS; PRO01305; Kringle; S.
R SWART; SM001305; Kri.
R SWART; SM00130; KR; 5.
R SWART; SM00020; Tryp_SPc; 1.
R PROSITE; PS00021; KRINGLE 1; 5.
R PROSITE; PS00010; KRINGLE 1; 5.
R PROSITE; PS00134; TRYPSIN DOM; 1.
R PROSITE; PS00134; TRYPSIN DOM; 1.
R PROSITE; PS00135; TRYPSIN DOM; 1.
R PROSITE; PS00135; TRYPSIN DOM; 1.
R PROSITE; PS00135; TRYPSIN SR; 1.
R PROSITE; PS00135; TRYPSIN SR; 1.
R PROSITE; PS00135; TRYPSIN SR; 1.
R PROSITE; PS00135; TRYPSIN SR; 1.
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R PROSITE; PS00135; TRYPSIN SR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      488 GYRGKRATTVTGTPCQDWAA-----QEPHRHSIFTPETNPRAGLEK-NYCRNPDGDVGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345 PQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWI 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               749 LAGGIDSCQGDSGGPLVCFEKDKYILQGVISWGLGCARPNKPGVYVRVSRFVTWI 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cox L.A., Jett C., Hixson J.E.;
"Molecular Basis of the Apolipoprotein (a) Null Phenotype: A Splice Site Mutation is Associated with Deletion of a Single Exon in a Null Allele.";
Submitted (OCT-1997) to the EMBL/GenBank/DBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Papio hamadryas (Hamadryas baboon).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Cercopithecidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        64;
                                                                                                                                                                                                                                                                                                                                                                                                    Length 810;
                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 498; DB 4; Length 81; Pred. No. 4.2e-39; 45; Mismatches 168; Indels
                                                                                                                                                                                                                                                                                                                               PLASMINOGEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
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810 AA; 90555 MW;
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BABAPOA.
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NCBL_TaxID=9557;
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nes 138;
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50 CYEGNGHFYRGKASTDIMGRPCLPWNSATVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108 RRRPWCYVQVGLKPLV--QECMVHDCAD-------GKKPSSPPEEL 144
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209 -FDCGKPQVEPKKCPGRVVGGCVAHAHSWPWQVSL--RTRFGK--HFCGGTLISPEWVLT 263
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            316 ----SRPAIITDKVIPAČLPS----PNYVITAWTEČYITGWGETQGT--FGAGLLREARL 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318 KLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68; Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
InterPro; IPR001314; Chymotrypsin.

InterPro; IPR001314; Chymotrypsin.

InterPro; IPR001254; Ser protease_Try.

Fram; PP000051; Kringle.

PRINTS; PR00152; CHYMOTRYPSIN.

PRINTS; PR00125; CHYMOTRYPSIN.

PRINTS; PR00108; KRINGLE.

RART; SM0018; KRINGLE.

RART; SM00100; KRINGLE.

RART; SM00100; TRYP. SPC. 1.

RART; SM0010; KRINGLE. 1.

PROSITE; PS00010; KRINGLE. 1.

PROSITE; PS50070; KRINGLE. 2.

PROSITE; PS50070; KRINGLE. 2.

RART; SM0010; KRINGLE. 3.

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RART; SM010; KRINGLE. 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              454 AA; 50041 MW; 974E30744C187B2F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. 13, Last sequence update) 01-MAX-2003 (TrEMBLrel. 23, Last annotation update) Plasminogen protein precursor (EC 3.4.21.7). PLASMINOGEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.6%; Score 496; DB 6; 34.0%; Pred. No. 3.1e-39;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 812 AA
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us-09-880-503-3.rspt

RESULT 23

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606 --QHFCGGTLISPEWVLTAAHCLEKSSRPEFYKVILGAHEERILGSDVQ---QIAVTKLV 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            503 QEWAA----QEPHSHRIFTPQTNPRAGLEK-NYCRNPDGDVNGPWCYT-NNPRKLYDYC 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184 SVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSR---LNSNTQGEMKFEVENLI 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQF----GTSCEIT 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       297 GFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDS 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72 LPWNSATVLQQTYHAHRSDALQ----LGLGKHNYCRNPD-NRRRPWCYVQVGLKPLVQEC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 MYHDCADGKKPSSPPEELKFQCGQKTLRPR---FKIIGGEFTTIENQPWFAAIYRRHRGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661 LEPNDA-----DIALLKL----SRPATITDNVIPACLPS----PNYVVADRTLCYIT 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 NIHW--CN---CPKKFGG--QHCEIDK-----SKT-CYEGNGHFYRGKASTDTMGRPC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00338; SOMMIOTROFIN 2; 1.
PROSITE; PS00240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
Glycoprotein; Hydrolase; Kringle; Protease; Signal.
                                                                                   Kanalas J.J. Makker S.P.; "Identification of the rat Heymann nephritis autoantigen (GP330) as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             357 GGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEE 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              763 GGPLVCFEKDKYILQGVTSWGLGCARPNKPGVYVRVSRYVNWIEREMRND 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.6%; Score 496; DB 11; Length 812; 33.2%; Pred. No. 6.6e-39; tive 56; Mismatches 148; Indels 70
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 812 PLASMINGGEN.
812 AA; 90535 MW; 8C703C51410EBC9E CRC64;
                                                                                                                receptor state for plasminogen.";
J. Biol. Chem. 266:10829(1991).
-!- SIMILARITY: CONTAINS FRINGLE DOMAINS.
EMBL; AJ24649; CAB46014.1; -.
HSSP; P00747; IPWK.
INTEPPO; IPR001314; Chymotrypsin.
INTEPPO; IPR001314; Chymotrypsin.
INTEPPO; IPR003004; Pan.app.
INTEPPO; IPR003004; Pan.app.
INTEPPO; IPR003066; Prothrombin.
INTEPPO; IPR001254; Ser_protease Try.
INTEPPO; IPR001254; Ser_protease Try.
Fam; PF00051; Kringle; 5.
Pfam; PF00054; PAN; 1.
                                                                MEDLINE=91250378; PubMed=1645711;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Prodon; PD000395; Kringle; 5.
SMART; SM00130; KR; 4.
SWART; SM00473; PAN AP; 1.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS00021; KRINGLE_1; 5.
PROSITE; PS50070; KRINGLE_2; 5.
                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 33.2
Matches 136; Conservative
                                     SECUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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132 ADGKKPSSPPEELKFQCGQ----KTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYV 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189 CGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSAD 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82 CAGSLIAPCWVLTAAHCLQDRPAPEDLTVVLGQERRNHSCEPCQTLAVRSYRLHEAFS-- 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      249 TLAHHNDIALLKIR-SKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYL 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308 YPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQG- 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200 YASFLQEAQVPFLSLERCSAPDVHGSSILPGMLCAGFLEGGTDACQGDSGGPLVCEDQAA 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 AKREOPPSLTRNGPLSCGORLRKSLSSMTRVVGGLVALRGAHPYIAALYWGHS-----P
                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=21314992; PubMed=11421942;
Shubitowski D.M., Venta P.J., Douglass C.L., Zhou R.-X., Ewart S.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Perissodactyla, Equidae, Equus.
                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                         Query Match 21.5%; Score 495.5; DB 4; Length 300; Best Local Similarity 38.4%; Pred. No. 2.1e-39; Matches 107; Conservative 45; Mismatches 112; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367 -- RMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260 ERRLTLQGIISWGSGCGDRNKPGVYTDVAYYLAWIREHT 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen activator urokinase (Fragment).
                                       01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
            300 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT; 103 A.A.
            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Equus caballus (Horse).
                                                                                Hypothetical protein.
                                                                                                Homo sapiens (Human)
                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9796;
                                                                                                                                                                                   TISSUE=Lung;
                           096EF3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  095M89
             Q96EF3
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296EF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
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361 HEMCAGNIEGGNDSCQGDSGGPLVCYAQNTFVLQGVTSWGLGCANAMKPGVYTRVSKFVD 420
                                                                   306 PEKDYIVPSNTECYVTGWGETQDTGGEGY-----LKETGFPVIENKVCNRPSFLNGRVKD 360
  258 IHTERATESSKQERDVTKII---KGPAGT----DIALLKL----DRPALINDKVSPVCL 305
                                          281 PSMYNDPQFGTSCEITGFGKENST---DYLYPEQLKMTVVKLISHRECQOPHYYGSEVTT 337
                                                                                                                              338 KMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLP 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106 D-NRRRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR---FKIIG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59 DGDVGGPWCYT-INPRKLYDYCDVPQCASS-----SFDCGKPQVEPKKCPGRVG 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50 CYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAH----RSDALQLGLGKHNYCRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 CMFGNGKRYRGKKATTVTGTPCQEWAA----KEPHSHLIFTPETYPRAGLEK-NYCRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Molecular Basis of the Apolipoprotein (a) Null Phenotype: A Splice Site Mutation is Associated with Deletion of a Single Exon in a Null Allele.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Papio hamadryas (Hamadryas baboon).

Papio hamadryas (Hamadryas baboon).

Papio hamadryas (Hordata, Craniata, Vertebrata, Eutele Mammalia, Butheria, Primates, Catarrhini, Cercopithecidae, Cercopithecidae, Papio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-i- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; AF029692, AAB97887.1; -.
HSSP, P00747; 5HPG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334 AA; 36791 MW; C7DC06E03B965286 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.0%; Score 482.5; DB 6; 35.4%; Pred. No. 4.3e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46; Mismatches 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR003966; Prothrombin.
InterPro; IPR001254; Ser protease_Iry.
Pfam; PF00051; Kringle; 1.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
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PRODOM; PR0010395; KRINGLE.
SWART; SW00130; KR; 1
SWART; SW00130; KR; 1
PROSITE; PS00021; KRINGLE.; 1
PROSITE; PS00021; KRINGLE.; 1
PROSITE; PS00021; KRINGLE.; 1
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cox L.A., Jett C., Hixson J.E.;
                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 06, C
(TrEMBLrel. 06, I
(TrEMBLrel. 23, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plasminogen (Fragment)
                                                                                                                                                                                                                 WIRSHTKE 405
                                                                                                                                                                                                                                                          421 WIERSIKE 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEROPS; S01,233;
                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PDNR-RRPWCYVQVGLKPLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPR---FKII 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202 GGCVSKPHSWPW--QISLRTRG--KIHFCGGTLIDPQWVVTAAHCLERSDSPSAYKIMLG 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 221 RSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICL 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQ---TYHAHRSDALQLGLGKHNYCRN 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 WFAAIYRRHRGGSVTYVCGGSLISPCWVLSATHCFINYPKKEDYIVYLGRSRLSSTSPGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       172 WFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 KDCKNGNGAEYRGSTSMTVMGVTCQAWRSMTPHQHASFTPETHPDKGLE----SNQCRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. Hanumanthalan R., Jagadeeswaran P., Hanumanthalan R., Day K., Jagadeeswaran P., "Comprehensive analysis of blood coagulation pathways in teleostei: Evolution of coagulation factor genes and identification of zebrafish
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
'Polymorphism identification within 50 equine gene-specific sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasminogen precursor (Fragment).
Brachýdanio rerio (Zebrafish) (Danio rerio).
Brachýdanio rerio (Zebrafish) (Danio Eukaryota; Metazoa; Chodata; Craniata; Certebrata; Buteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
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                                                                                                                                                                                                                                                                                                                                                                                    Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                               6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         232 MKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRT 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 MKFEVEKLILHEDYSADTLAHHNDIALLKISSSTGOCAOPSRS 103
                                                                                                                                                                                                                                                                                                                                           103 AA; 11525 MW; 0B739514F6331180 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             429 AA; 47556 MW; 9A580A214A549C12 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                    ; DB 6;
5.9e-40;
             tagged sites.";
Anim. Genet. 32:78-78(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
EMBL; AY008806; AAK14840.1; -.
EMBL; AV008803; AAK14840.1; -.
InterPro; IPR001314; Chymctrypsin.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00089; trypsin; I.
PRINTS; PR007225, CHYMCYRYPSIN.
SMART; SM00020; Tryp. SPC; I.
PROSITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS50149; TRYPSIN_DOM; I.
                                                               S1.
                                                                                                                                                                                                                                                                            Hydrolase; Kinase; Protease; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                               7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                      21.5%; Score 495;
                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor VIII.";
Blood Cells Mol. Dis. 0:0-0(2002).
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                                                                                                                                                                                                                                                                                                                         103
                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=7955;
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                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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Q8AVB0;
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Q8AVB0
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13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYBGNGHFYRGKASTDTMGRPCL
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ed. receptor A.
InterPro; IPR001254; Ser_protease Try.
InterPro; IPR001190; Srcr_receptor.
Pfam; PF00557; 1dl_recept_a; 3.
Pfam; PF00589; trypsin; 1.
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SMART; SM00473; PAN AP; 1.
SMART; SM00473; PAN AP; 1.
SMART; SM00402; SR; 2.
SMART; SM00000; TYP_SPC; 1.
PROSITE; PS01009; IDIRA 1; 3.
PROSITE; PS50068; IDIRA 1; 3.
PROSITE; PS50068; IDIRA 2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00261; LDLRECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polyandrocarpa misakiensis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
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                                                                                                                                                                                                          280 LPSMYNDPQF----GISCELIGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEV 335
                                                                                                                                                                                                                                                                                                                               264 KSTELCAGHLAGGTDSCQGDSGGPLVCFEKDKYILQGVTSWGLGCARPNKPGVXVRVSRF 323
                                                                         22 SRLNSNTQGEMKFE--VENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTIC 279
                                                                                                                                                                                                                                                                                                                                                                                                                     336 TTKMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHF 395
                                       GEFTTIENOPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGR 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=98004511; PubMed=9342350;
Lawn R.M., Schwartz K., Patthy L.;
Lonvergent evolution of apolipoprotein(a) in primates and hedgehog.";
"Convergent evolution of apolipoprotein(a) in primates and hedgehog.";
Proc. Natl. Acad. Sci. U.S.A. 94:11992-11997(1997).
- I- SIMILARITY: CONTAINS 5 KRINGLE DOMAINS.
EMBL, AF012227; AAB65760.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plasminogen.
Macropus eugenii (Tammar wallaby).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Metatheria, Diprotodontia, Macropodidae, Macropus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50240; TRYPEIN DOM; 1.
PROSITE; PS50134; TRYPEIN HIS; 1.
PROSITE; PS00135; TRYPEIN EST; 1.
GROSITE; PS00135; TRYPEIN EST; 1.
GROUPCE B06 AA; 90981 MW; 95FAAB6DC20064D5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR003014; PaN.
InterPro; IPR003069; Pan. app.
InterPro; IPR003866; Prothrombin.
InterPro; IPR003286; Prothrombin.
InterPro; IPR003284; Ser protease_Try.
Pfam; PF00021; Kringle; 5.
Pfam; PF00031; Kringle; 5.
Pfam; PR00089; trypsin; 1.
PRINTS; PR0018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00130; KR; 4.
SMART; SM00473; PAN AP; 1.
SMART; SM000473; PAN AP; 1.
PROSITE; PS000021; KRINGLE 1; 5.
PROSITE; P500070; KRINGLE 2; 5.
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Best Local Similarity 32.0%
Matches 132; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396 LPWI 399
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448 CSGTGSTVLNAQTTRV----PSVDTTSHPESD----CMYGSGKDYRGKRSTTVTGTLCQ 498
                                                                                                                                                             553 PQCV---SPSS----FDCGKPRVEPQKCPGRIVGGCYAQPHSWPW--QISLRTRFGE- 600
                                                                                                                                                                                                                                                         246 SADTLAHH-------NDIALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSC 293
                                                                                                                                                                                                                                                                                 640 NPESYSQEIGVSRLFKGPLAADIALLKL----NRPAAINDKVIPACLPSQDFMVPDRTLC 695
                                                                                                                                                                                                                                                                                                                         294 EITGEGKENSTDYLYPE-QLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPOWKTDSC 352
                                                                                                                                                                                                                                                                                                                                                       696 HVTGWGDTQGTS---PRGLLKQASLPVIDNRVCNRHEYLNGRVKSTELCAGHLVGRGDSC 752
                                                             73 PWNSATVLQQTYHAH---RSDALQLGLGKHNYCRNPD-NRRRPWCYVQVGLKPLVQECMV 128
                                                                                                                                129 HDCADGKKPSSPPEELKFQCGQKTLRPR---FKIIGGEFTTIENQPWFAAIYRRHRGGSV 185
                                                                                                                                                                                             186 TYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDY 245
72
                                                                                                                                                                                                                  499 AWTA-----QEPHRHTIFTPDTYPRAGLEENYCRNPDGDPNGPWCYT-TNPKKLFDYCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               353 QGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTK 404
                                                                                                                                                                                                                                                                                                                                                                                                           753 QGDSGGPLICFEDDKYVLQGVTSWGLGCARPNKPGVYVRVSRYISWIEDVMK 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tunicate retinoic acid-inducible modular protease precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea;
Stolidobranchia; Styelidae; Polyandrocarpa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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PROSITE; PS00134; TRYPSIN<sup>*</sup>HIS; 1.
PROSITE; PS00135; TRYPSIN<sup>*</sup>SER; 1.
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Search completed: Deceml
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Matches
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                                                                                                                                                                                                  311 QLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQG--RM 368
                                                                                                                                                                                                                     769 VLQEAEIPLIANKKCLRDSEY-TQLGPTMFCAGYLTGGKDSCQGDSGGPLSCRDQSDDRY 827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFI 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGOPRMSSR--IVGGRDGRDGEWPWOASI--OHRG---AHVCGGSLIAPOWVLTAAHCFP 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         208 DYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGR 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268 CAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYP------EQLKMTVVKLI 320
                                                                                                                                PSSPPBELKFQCGQKTL----RPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGS
                                                                                                PTPPPMP---ECGRKPVIEAPLPTARIVGGSGTEPHEWPWQAGIWL-----PWTYWCGGS
                                                                                                                     193 LISPCWVISATHCFI-DYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLA
                                                                                                                                                           252 HHNDIALLKIRSKEGRCAQPSRIIQTICLPSMYNDPQFGTSCEITGFGKENSTDY-LYPE
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Similar to protease, serine, 8 (Prostasin) (Fragment).
Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                           21;
                                         Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19.2%; Score 442.5; DB 4; Length 327; 38.8%; Pred. No. 3e-34; Live 35; Mismatches 96; Indels 33
                                                                                                                                                                                                                                                                                                                                                                                                                                            20.1%; Score 463.5; DB 5; Length 138.9%; Pred. No. 9.9e-36; ive 44; Mismatches 103; Indels
          POTENTIAL.
F71462865F36A6CA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        327 AA; 35106 MW; 60458ED817AC1CF3 CRC64;
                                                                                                                                                                                                                                                      : |||||| ||| ||| 828 YVWGIVSWGNGCAKPKAPGVYAKVAVFIDWIEQMT 862
                                                                                                                                                                                                                                          369 TLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHT 403
  Signal.
 Serine protease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase; Protease; Serine protease.
                  97660 MW;
                                               al Similarity 38.9% 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                               PRELIMINARY;
 Hydrolase; Protease;
SIGNAL 1
                   868 AA;
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Best Local Similarity
Matches 104; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Brain;
                                                                                                 601
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                   SEQUENCE
                                       Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268 CAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYP-----EQLKMTVVKLI 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135 PVPLSARVQPVCLPVPGARPPGTPCRVTGWGS-----LRPGVPLPEWRPLQGVRVPLL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321 SHRECQQPHYYGSEVTTK-----MLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGI 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189 DSRICDGLYHVGADVPQAERIVLPGSLCAGYPOGHKDACQGDSGGPLTCLQSGSWVLVGV 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                       | | :: |::| | : | |::| | DSRTCDGLYHVGADVPQAERIVLPGSLCAGYPQGHKDACQGDSGGPLTCLQSGSWVLVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CQQPRMSSR--IVGGRDGRDGBWPWQASI--QHPG---AHVCGGSLIAPQWVLTAAHCPP
                                                                                      SHRECQOPHYYGSEVTTK-----MLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGOKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
n.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

Darrow A.L., Qi J., Andrade-Gordon P., Chen C.;

"DNA encoding the human serine protease EOS.";

Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.

-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

EMBL, AFS36382; AAN04055.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pran; PP00089; trypsin; 1.
PRINIS; PR00122; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
Hydrolase; Protease; Serine protease.
SEQUENCE 284 AA; 30110 MW; FDF3F1750D569978 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                        284 AA
                                                                                                                                                                                                                                   296 VSWGKGCALPNRPGVYTSVATYSPWIQA 323
                                                                                                                                                                                                  374 VSWGRGCALKDKPGVYTRVSHFLPWIRS 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249 VSWGKGCALPNRPGVYTSVATYSPWIQA 276
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Conservative 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December
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les 103; Conserv
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Sequence 2, Appli
Sequence 184, App
Sequence 149, App
Sequence 4, Appli
Sequence 1, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
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21, Appl
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5, Appli
3, Appli
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                                                                                              2003, 14:43:04 ; Search time 42.1951 Seconds (without alignments)
1811.566 Million cell updates/sec
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                                                                                                                                                                                                  1 SNELHQVPSNCDCLNGGTCV......VSHFLPWIRSHTKEENGLAL 411
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| cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
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12: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
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14: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/USO0_NEW_PUB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/USO0_NEW_PUB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-10-301-822-161

US-10-131-985-21

US-10-176-421-2

US-10-276-421-2

US-10-247-671-149

US-10-193-65-4

US-10-193-65-4

US-10-407-821-2

US-09-880-503-6

US-09-880-503-6

US-09-880-503-6

US-10-6-98-6266

US-09-880-503-6

US-10-6-98-6266

US-09-880-503-7

US-10-10-6-98-6266

US-09-880-503-8

US-10-407-821-3

US-10-407-821-3
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                                                                                                                                                                                                                                                                                     684280 segs, 185983659 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                  OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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seq length: 200000000
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Match Length
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Maximum DB
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Sequence 47, Appl	Sequence 18, Appl	equence 1	7.	<u>ب</u> ده	4	Φ	equence 8	4	equence 1	equence 1	equence 1	Н	М	equence 1	ω,	m (B	equence 1	Н	æ	Н	equence 1		Н	-	~4	equence 1	H	equence 2	
-09-898-837A-	-09-987-457-	09-987-455-1	9-969-27	-09-974-2	-10-443-7	-10-193-656-	-09-880-503	-088-60-	4-186-1	-10-237-667-1	-10-237-708-1	-10-237-866-	1-237-871-1	1-237-624-1	84	1-102-704-	1-987-457-1	1-987-455-	1-987-455-	-09-987-457-1	-09-987-455-1	-09-987-45	-09-987-455-1	-09-987-457-1	-09-987-455-	US-09-987-457-15	-09-987-455-1	-10-172-712-2	-987-457
241 11	27 1	27 1	62	62 1	62 1	62 1	43 1	35 1	138 10	38 1	38 1	38 1	38 1	38 1	72	72 1	54 1	54 1	77 1	43 1	43 1	339 11	39 1	31 1	31 1	43 1	43 1	55	35 1
1318 57.3	64.5 37.6	64.5 37.6	4.5 37.6	64.5 37.6	64.5 37.6	64.5 37.6	37 36.4	93 34.5	93 34.5	93 34.5	93 34.5	93 34.5	93 34.5	93 34.5	34.1	85.5 34.1	80 33.9	80 33.9	80 33.9	41 32.2	41 32.2	40 32.2	32.2	37 32.0	32.0	37 32.0	37 32.0	.5 32.0	33 31.9
16	17	18	19	20	21	22	23	24	25	56	27	28	53	30	31	32	33	34	35	36	37	8 9	39	40	41				

## ALIGNMENTS

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Sequence 3, Application US/09880503
Patent No. US20020131964A1
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REPERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 KASTDTWGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLVQBCWVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
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0
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                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 3
LENGTH: 411
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                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 411; Conserv
RESULT 1
US-09-880-503-3
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                                                                              321 ENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPL 380
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                                                                                                                                                                  381 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
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                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dack, Kevin N
APPLICANT: Dackes, Michael J
APPLICANT: Davies, Michael J
APPLICANT: Huggins, Jonathan P
APPLICANT: Huggins, Jonathan P
APPLICANT: Occiseton, Nicholas L
APPLICANT: Occiseton, Nicholas L
APPLICANT: Occiseton, Nicholas L
APPLICANTON: Composition
FILE REFERENCE: PCS 10391A
CURRENT APPLICATION NUMBER: US/09/726,295
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 1999-12-29
NUMBER OF SEQ ID NOS: 60
SOFTWARE: PatentIn Ver. 2.1
LENGTH: 431
                                                                                                                                                                                                                                                                                                                            Sequence 21, Application US/10131985; Publication No. US20030199440A1; GENERAL INFORMATION:
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US-10-076-421-2
; Sequence 2, Application US/10076421
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Best Local Similarity 100.0
Matches 411; Conservative
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CRGANISM: Homo sapiens
US-10-131-985-21
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APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Berger, Allison
APPLICANT: Gaullemette, Tracy L.
APPLICANT: Gaullemette, Tracy L.
APPLICANT: Gaullemette, Shubhangi
APPLICANT: Schlegel, Robert
APPLICANT: Monahan, John B.
APPLICANT: Monahan, John B.
APPLICANT: Monahan, John B.
APPLICANT: Muscance Genes, Compositions, KITS, AND
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: MATADOS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, THERAPY OF COLON CANCER
TITLE OF INVENTION: THERAPY OF COLON CANCER
TITLE OF INVENTION: WUMBER: US/10/301,822
CURRENT FILING DATE: 2002-11-21
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-12-03-05
PRIOR FILING DATE: 2002-03-05
PRIOR FILING DATE: 2002-03-05
PRIOR FILING DATE: 2002-05-05
PRIOR FILING DATE: 2002-05-05
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100.0%; Score 2301; DB 12;
Best Local Similarity 100.0%; Pred. No. 2.7e-194;
Matches 411; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 161, Application US/10301822; Publication No. US20030148410A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , ORGANISM: Homo Sapiens
US-10-301-822-161
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                                                                                                                                                                                                                                                                                                         100.0%; Score 2301; DB 15; Length 431; 100.0%; Pred. No. 2.7e-194;
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Fublication No. US20030194721A1
GENERAL INFORMATION:
APPLICANT: Mikita Thomas
APPLICANT: Shiffman, Dov
APPLICANT: Shiffman, Dov
ITILE REPERENCE: Matthew R.
ITILE REPERENCE: PA-0550 US
CURRENT APPLICATION NUMBER: US/10/247,671
FILE REPERENCE: 2002-09-18
FRICK APPLICATION NUMBER: 60/323,784
PRIOR FILING DATE: 2001-09-19
NUMBER OF SEQ ID NOS: 186
SOFTWARE: PREL PROGram
SEQ ID NO 149
FILE REPERENCE: 2001-09-19
NUMBER OF SEQ ID NOS: 186
SEQ ID NO 149
SEQ ID NO 1431
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OTHER INFORMATION: Incyte ID No. US20030194721A1 1453334CD1
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PRIOR FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/298,155
PRIOR FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/335,936
PRIOR FILING DATE: 2001-11-14
NUMBER OF SEQ ID NOS: 238
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 184
                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 411, Conservative
                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo sapiens
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ORGANISM: Homo sapiens
FEATURE:
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APPLICANT: Chen, Yan
APPLICANT: Zhao, Xumei
APPLICANT: Monahan, John
APPLICANT: Ramatkar, Shubhangi
APPLICANT: Glatt, Karen
APPLICANT: Glatt, Manjula
APPLICANT: Hoersh, Sebastian
APPLICANT: Hoersh, Sebastian
APPLICANT: HOERSH, SEVENTION: NOYEL GRNES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY
TITLE OF INVENTION: OF CERVICAL CANCER
FILE REFERENCE: MRI-035
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                                    APPLICANT: WADA, MANABU
APPLICANT: WADA, MANABU
TILE OF INVENTION: ANTI-HIV AGENTS
FILE REPERENCE: HAYAK-9
CURRENT APPLICATION NUMBER: US/10/076,421
CURRENT FILING DATE: 2002-05-17
PRIOR APPLICATION NUMBER: JP 2001-42655
PRIOR FILING DATE: 2001-02-20
PRIOR FILING DATE: 2001-06-19
NUMBER OF SEQ ID NOS: 5
SOFTWARE: Patentin Ver. 2.1
SQO ID NO.
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Publication No. US20030087270A1
GENERAL INFORMATION:
Publication No. US20020193304A1
GENERAL INFORMATION:
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ORGANISM: Homo sapiens
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Best Local Similarity
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US-10-171-311-184
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APPLICANT: IDELL, STEVEN
TITLE OF INVENTION: INTRAPLEURAL SINGLE-CHAIN UROKINASE ALONE OR COMPLEXED
TITLE OF INVENTION: INTRAPLEURAL SINGLE-CHAIN UROKINASE ALONE OR COMPLEXED
TITLE OF INVENTION: TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEUBAL
TITLE OF INVENTION: ADHESIONS IN TETRACYCLINE-INDUCED PLEURITIS IN RABBITS
FILE REFERENCE: UTSN:022US
CURRENT APPLICATION NUMBER: US/10/407,821
CURRENT FILING DATE: 2002-04-04
PRIOR APPLICATION NUMBER: 60/414,202
PRIOR PILING DATE: 2002-09-27
PRIOR PILING DATE: 2002-09-27
PRIOR FILING DATE: 2002-09-27
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PATCHIN Ver. 2.1
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Pred. No. 1.9e-193;
0; Mismatches 1;
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; Publication No. US20030219386A1
; GENERAL INFORMATION:
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Matches 410; Conservative
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ORGANISM: Homo sapiens
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US-10-407-821-2
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                              Indels
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| APPLICANT: NY. TOTAL
| APPLICANT: HOLMDAHL, Rikard
| APPLICANT: HOLMDAHL, Rikard
| APPLICANT: LI, Jinan
| TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
| TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
| CURRENT APPLICATION NUMBER: US 60/304,461
| PRIOR APPLICATION NUMBER: US 60/304,490
| PRIOR APPLICATION NUMBER: US 60/304,490
| PRIOR APPLICATION NUMBER: US 60/304,490
| PRIOR FILING DATE: 2001-07-10
| PRIOR FILING DATE: 2001-07-10
| PRIOR FILING DATE: 2001-07-13
| NUMBER OF SEQ ID NOS: 18
| SEQ ID NO 4
| TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR - TENNOR
     99.8%; Pred. No. 4e-194; ive 1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Genbank / P00749;
DATABASE ENTRY DATE: 1986-07-21;
RELEVANT RESIDUES: (1)..(431)
US-10-193-656-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 4, Application US/10193656; Publication No. US20030096733A1; GENERAL INFORMATION:
Best Local Similarity 99.E
Matches 410; Conservative
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Sequence 7, Application US/0980503

Patent No. US20020131964A1

GENERAL INFORMATION:
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR PEPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                    APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
SUMMER OF SEQ ID NOS: 18
SOFTWARE: Patent IN Ver. 2.1
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381 VCSLQGRWILTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 431
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98.1%; Pred. No. 3.2e-189;
tive 0; Mismatches 0;
                                                                                                                                                          US-09-880-503-6
; Sequence 6, Application US/09880503
; Patent No. US-02020131964A1
; GENERAL INFORMATION:
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                                                                        361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
                                               361 VCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL 411
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                                                                                                                                                                                                                                                                                                                                      APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Smith, Richard A.
APPLICANT: Smith, Richard A.
APPLICANT: Severin, Jean M.
APPLICANT: Severin, Jean M.
APPLICANT: Generin, Thomas P.
APPLICANT: Johnson Jr., Robert W.
APPLICANT: Johnson Jr., Robert W.
APPLICANT: Johnson Jr., Robert W.
APPLICANT: Johnson Jr., Robert W.
APPLICANT: Johnson Jr., Robert W.
APPLICANT: HICHAY (RYSTALLINE URCKINASE FILE REFERENCE: 6310.US.Pl
CURRENT APPLICATION: NUMBER: US/09/264,468B
CURRENT APPLICATION NUMBER: US 09/036,361
PRIOR FILING DATE: 1998-03-06
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (1)...(20)
OTHER INFORMATION: Leader sequence
NAME/KEY: VARIANT
LOCATION: (279)...(279)
OTHER INFORMATION: Xaa = any amino acid
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LOCATION: (302)...(302)
OTHER INFORMATION: Xaa = any amino acid
                                                                                                                                                                                                                                              Sequence 1, Application US/09264468B Patent No. US20020106775A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: SIGNAL
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Sequence 5, Application US/09880503
Patent No. US20020131964A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TOTAL OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND TITLE OF INVENTION: TISSUE CONTRACTABILITY
TITLE OF INVENTION: TISSUE CONTRACTABILITY
TITLE OF INVENTION: TISSUE CONTRACTABILITY
TITLE OF INVENTION: TISSUE CONTRACTABILITY
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
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US-10-407-821-3
US-10-407-821-3
Sequence 3, Application US/10407821
Publication No. UG20030219386A1
GENERAL INFORMATION:
APPLICANT: IDELL, STEVEN
TITLE OF INVENTION: INTEAPLEURAL SINGLE-CHAIN UROKINASE ALONE OR COMPLEXED
TITLE OF INVENTION: TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL
TITLE OF INVENTION: ADHESIONS IN TETRACYCLINE-INDUCED PLEURITIS IN RABBITS
    KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                PLVOECMVHDCADGKKPSSPPEELKFOCGOKTLRPRFKIIGGEFTTIENOPWFAAIYRRH 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256 IALLKIRSKEGRCAQPSRTIQTICLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMT 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 VVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVS 240
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                                                                                                       1 KPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196 PCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHND
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                                                                                                                                                              RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLI
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US-09-880-503-5
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SEQ ID NO 5
LENGTH: 276
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US-09-880-503-5
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Publication No. US20330109690A1

Publication No. US20330109690A1

APPLICANT: Ruben et al.

TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide

TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide

TITLE OF INVENTION NUMBER: US/10/106,698

CURRENT APPLICATION NUMBER: PCT/US00/26524

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR FILING DATE: 1999-09-29

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR APPLICATION NUMBER: US 60/163,280

PRIOR APPLICATION NUMBER: US 60/163,280

NUMBER OF SEQ ID NOS: 8564

SCO ID NO 6266
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                                                                                                                                                                                                                                                                                                                                                                                                      121 PLVQECMVHDCADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRH 180
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                                                                                                                                                                                                                                          1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
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                                                                                                                                                         Score 1737; DB 10;
Pred. No. 8.8e-145;
0; Mismatches 0;
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                                                                                                                                                              75.5%;
78.6%;
NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 7
                                                                                                                                                                                                    Conservative
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; ORGANISM: Homo sapiens
US-10-106-698-6266
                                                                              TYPE: PRT
CRGANISM: Homo sapiens
US-09-880-503-7
                                                                                                                                                                               Similarity
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US-10-106-698-6266
                                                                                                                                                            Query Match
Best Local Simil
Matches 323; C
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                                                           LENGTH: 323
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Matches 27
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-898-837A-47
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US-09-898-837A-47
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Publication No.
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63.6%; Score 1464; DB 12; Length 268;
Best Local Similarity 100.0%; Pred. No. 7.6e-121;
Matches 268; Conservative 0; Mismatches 0; Indels 0
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APPLICANT: Wang, Jieyi
APPLICANT: Wang, Wicki L.
APPLICANT: Henkin, Jack
APPLICANT: Smith, Richard A.
APPLICANT: Smith, Richard A.
APPLICANT: Salin, Rohnton
APPLICANT: Edalji, Rohnton
APPLICANT: Gallji, Rohnton
APPLICANT: Holzman, Thomas F.
TITLE OF INVENTION: HIGHLY CRYSTALLINE UROKINASE
FILE REFERENCE: 6310, US. PI
CURRENT APPLICATION NUMBER: US 09/264,468B
CURRENT FILING DATE: 1999-03-05
FRIOR APPLICATION NUMBER: US 09/036,361
FRIOR FILING DATE: 1998-03-06
NUMBER OF SEQ ID NOS: 23
SOPTHARE: FASTSEQ for Windows Version 4.0
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Best Local Similarity 99.2%; Pred. No. 2.4e-109;
Matches 244; Conservative 0; Mismatches 2;
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              CURRENT APPLICATION NUMBER: US/10/407,821
CURRENT FILING DATE: 2003-04-04
PRIOR APPLICATION NUMBER: 60/414,202
PRIOR FILING DATE: 2002-09-27
PRIOR FILING DATE: 2002-04-05
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PATCHIN VEY. 2.1
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FILE REFERENCE: UTSN:022US
                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-407-821-3
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                                                                                                                                                                             SEQ ID NO 3
LENGTH: 268
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159 IIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY

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APPLICANT: RESELLIA, LUCA
APPLICANT: Gerlach, Valerie L
APPLICANT: Gerlach, Valerie L
APPLICANT: Gerlach, Valerie L
APPLICANT: Gerlach, Valerie L
APPLICANT: Gerlach, Valerie L
APPLICANT: Gerlach, Valerie L
APPLICANT: MacDougall, John
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING THE SAME
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING THE SAME
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING THE SAME
CURRENT APPLICATION NUMBER: US.S.N. 60/165,986
PRIOR FILLING DATE: 2001-07-03
PRIOR FILLING DATE: 2000-04-05
PRIOR APPLICATION NUMBER: US.S.N. 60/195,637
PRIOR PELICATION NUMBER: US.S.N. 60/195,637
PRIOR PELICATION NUMBER: US.S.N. 60/195,637
PRIOR PELICATION NUMBER: US.S.N. 60/195,637
PRIOR PELICATION NUMBER: US.S.N. 60/194,195
PRIOR PELICATION NUMBER: US.S.N. 60/194,195
PRIOR PELICATION NUMBER: US.S.N. 60/194,195
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR FILLING DATE: 2000-04-03
PRIOR PELICATION NUMBER: US.S.N. 60/215,906
PRIOR PELICATION NUMBER: US.S.N. 60/215,906
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PRIOR PELICATION NUMBER: US.S.N. 60/215,906
PRIOR PELING DATE: 2000-11-16
PRIOR PELING DATE: 2000-11-16
PRIOR PELING DATE: 2000-11-16
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                                                                                                                                                                            61 LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI 120
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                                                                                                                                                                                                                                                                                                                                                                                                                      MLCAADPQWKTDSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHPLPW 398
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                                              9
1 IIGGEFTTIENQPWPAAIYRRHRGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVY
                                                                                                                                                                                                                                                                                                                    121 ALPSMYNDPQFGTSCEITGFGKEQSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK
                                                                                                                 219 LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI
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99.6%; Pred. No. 4.8e-108;
tive 1; Mismatches 0;
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Taupier Jr., Raymond
Rastelli, Luca
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APPLICANT: Spytek, Kimberly A.
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Burgess, Catherine
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SEQ ID NO 47
LENGTH: 241
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Matches 240; Conserv
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399 ADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCA 458
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APPLICANT: Jiadej Manosroi
APPLICANT: Charchai Tayapiwatana
APPLICANT: Charchai Tayapiwatana
APPLICANT: Charchai Tayapiwatana
APPLICANT: Charchai Tayapiwatana
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: Mondage: US/09/987,455
FURRENT FLING DATE: 219001
PRIOR PELICATION NUMBER: 60/268,574
PRIOR APPLICATION NUMBER: GB 0027779.8
PRIOR APPLICATION NUMBER: GB 0027779.8
PRIOR FILING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 25
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 19
                          MYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCA
                                                                                                           AD----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL
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                                                                                                                                                                                                                                                                                                                                      ; Sequence 19, Application US/09987455; Publication No. US20030049729A1; GENERAL INFORMATION:
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Best Local Similarity 38.1%
Matches 186; Conservative
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DWIRDNMR 526
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US-09-987-455-19
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US-09-987-455-19
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                                                                                                                                              CLPSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTK 338
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LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI
                                                                                                  LGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTI
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APPLICANT: Manosroi, Jiradej
APPLICANT: Tayapiwatana, Chatchai
APPLICANT: Tayapiwatana, Chatchai
APPLICANT: Goetz, Friedrich
APPLICANT: Werner, Rolf-Guenther
TITLE OF INVENTION: Methods for Large Scale Pro-
FILE REFERENCE: 065-2180001
CURRENT APPLICATION NUMBER: US/09/987,457
CURRENT FILING DATE: 2001-11-14
PRIOR FILING DATE: 2001-02-15
PRIOR FILING DATE: 2001-02-15
PRIOR FILING DATE: 2001-11-14
PRIOR FILING DATE: 2001-11-14
SPIOR FILING DATE: 2001-11-14
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 18
LENGTH: 527
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US-09-987-457-18
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US-09-987-457-18
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RESULT 21
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               459 GDTRSGGPQANLHDACQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYL 518
AD-----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
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TITLE OF INVENTION: Pharmaceutical Combinations
FILE REFERENCE: PCS10951APME
CURRENT APPLICATION NUMBER: US/09/969,271
PRIOR PILING DATE: 2001-10-01
PRIOR APPLICATION NUMBER: GB 0025473.0
PRIOR FILING DATE: 2000-10-17
NUMBER OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Mindows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56; Mismatches 157; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          37.6%; Score 864.5; DB 9; 38.1%; Pred. No. 1.2e-67;
                                                                                                                                                             Sequence 7, Application US/09969271
Patent No. US20020098179A1
GENERAL INFORMATION:
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Matches 186; Conservative
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519 DWIRDNMR 526
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ORGANISM: Homo sapiens
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RESULT 20 US-09-974-298-145

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196 GKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLRWNSMILIGKVYTAQNPS 255
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Publication No. US20030199016A1
GENERAL INFORMATION:
APPLICANT: Xu, Yuan
TITLE OF INVENTION: REVERSE-PHASE HPLC ASSAY FOR PLASMINOGEN ACTIVATORS
FILE REPERENCE: P1788H.
CURRENT APPLICATION NUMBER: US/10/443,701
CURRENT FILING DATE: 2003-05-21
PRIOR APPLICATION NUMBER: US/09/703,695
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            562;
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; OTHER INFORMATION: Incyte ID No. US20020156263A1 1001470CD1
US-09-974-298-145
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Sequence 145, Application US/09974298
Patent No. US20020156263A1
GENERAL INFORMATION:
APPLICANT: Chen, Huei-Mei
TITLE OF INVENTION: GENES EXPRESSED IN BREAST CANCER
FILE REPERENCE: PA-0037 P
CURRENT APPLICATION NUMBER: US/09/974,298
CURRENT PILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/238,331
PRIOR APPLICATION NUMBER: 60/238,331
SPROR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 194
SOFTWARE: PERL PROGRAM
LENGTH NO 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10;
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ORGANISM: Homo sapiens
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SOFTWARE: Patentin Ver. 2.1
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ORGANISM: Homo sapiens
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                                                                                                                                                                              Length 562;
                                                                                                                                                                          37.6%; Score 864.5; DB 12; Length 38.1%; Pred. No. 1.2e-67; cive 56; Mismatches 157; Indels
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APPLICANT: HOLMDAHL, RIKARD
APPLICANT: HIJ Jinan
TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
FILE REFERENCE: 3810/1J577-US3
FILE REFERENCE: 3810/1J577-US3
FILE REFERENCE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/304,490
PRIOR APPLICATION NUMBER: US 60/304,490
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR FILING DATE: 2001-07-13
NUMBER OF SEQ 1D NOS: 18
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                60/163,607
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                                                                                                                                                                                                                                                                                                                                                                                         119 LKPLVQECMVHDCADG----
PRIOR FILING DATE: 2000-11-01
PRIOR APPLICATION NUMBER: US 6
PRIOR FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 4
SEQ ID NO 4
                                                                                                                                                                          Query Match
Best Local Similarity 38.1
Matches 186; Conservative
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DWIRDNMR 561
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                                                                                                                          ORGANISM: Homo sapiens
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US-10-193-656-8
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LENGTH: 562
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                                                                                                       TYPE: PRT
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Sequence 8, Application US/09880503
; Patent No. US20020131964A1
; GENERAL INFORMATION:
GENERAL INFORMATION:
TAPLICANT: CINES, Douglas B
; APPLICANT: CINES, Douglas B
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
; TITLE OF INVENTION: TISSUE CONTRACTABILITY
; CURRENT APPLICATION NUMBER: US/09/880,503
; CURRENT FILING DATE: 2001-06-13
; PRIOR PELLING DATE: 2000-06-20
; NUMBER OF SEQ ID NOS: 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                77 QCHSVPVKSCSEPRCFNGGTCQQALYFSDF-VCQCPEGFAGKCCEIDTRATCYEDQGISY 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -KKPS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196 GKYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLITESGASCLPWNSMILLIGKVYTAQNPS 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -------SPPEELK--------FQCG-QKTLRPRFKIIGGE 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FITIENQPWFAAIYRRH-RGGSVTYVCGGSLISPCWVISATHCFIDYPKKEDYIVYLGRS 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           223 RINSNIQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICLPS 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             283 MYNDPOFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQOPHYYGSEVTTKMLCA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           343 AD----PQWKT-DSCQGDSGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFL 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 494 GDTRSGGPQANLHDACQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYL 553
                                                                                                                                                                                                                                                                                                                                                                                                  58
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                                                                                                                                                                                                                                                                                                                                 89;
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                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                Query Match
37.6%; Score 864.5; DB 15; Length
Best Local Similarity 38.1%; Pred. No. 1.2e-67;
Matches 186; Conservative 56; Mismatches 157; Indels
TYPE: PRT
ORGANIGM: Homo sapiens
ORGANIGM: Homo sapiens
DATABASE ACCESSION NUMBER: GenBank / P00750
DATABASE ENTRY DATE: 1986-07-21
RELEVANT RESIDUES: (1)..(562)
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Best Local Similarity
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us-09-880-503-3.rapb

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APPLICANT: Fleer, Reinhard
Pournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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100.0%; Pred. No. 4.1e-62;
iive 0; Mismatches 0;
                                                                MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/984,186
FILING DATE: 29-Oct-2001
CLASSIFICATION: UNKnown>
PRIOR APPLICATION OF 1997
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN.1997
APPLICATION NUMBER: FR 92/01064
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 28-JAN.1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN.1993
ATTORNEY/AGRAT INFORMATION:
NAME: SHILL Ph.D., Julie K.
REGISTRATION UMBER: P38,619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: ST92006-US
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12, Application US/10237667
Publication No. US20030022308A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     454-3808
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (610) 454-36
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 PLVQECMVHDCADGK 135
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                         ZIP: 19426
COMPUTER READABLE FORM:
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Best Local Similarity 100.0
Matches 135; Conservative
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PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/09880503

Sequence 4. Application US/09880503

Patent No. US20020131964A1

GENERAL INFORMATION

APPLICANT: CIRES, Douglas B

APPLICANT: HIGAZI, Abd Al-Roof

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND

TITLE OF INVENTION: TISCUE CONTRACTABILITY

FILE REFERENCE: 9596-331

CURRENT APPLICATION NUMBER: US/09/880,503

CURRENT FILING DATE: 2001-06-13

PRIOR APPLICATION NUMBER: US 60/212,847

PRIOR FILING DATE: 2000-06-20

NUMBER OF SEQ ID NOS: 18

SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                             61 KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVOVGLK 120
                                                                                                                                                 61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                     1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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Indels
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ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.08; Prec. ...
Mismatches
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
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Sequence 12, Application US/09984186
Patent No. US20020151011A1
GENERAL INFORMATION:
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143; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
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Matches
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TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 123
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34.5%; Score 793; DB 15;
Best Local Similarity. 100.0%; Pred. No. 4.1e-62;
Matches 135; Conservative 0; Mismatches 0;
                                   MEDIUM TIRE: TIOPPY GIBS

COMPUTER: Macintosh

SOFTWARE: Word 5.1 (Patentin)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/237,708

FILING DATE: 10-Sep-2002

CLASSIFICATION: cUnknown>

APPLICATION NUMBER: US/08/797,689

FILING DATE: 31-JAN-1997

APPLICATION NUMBER: US 08/256,927

APPLICATION NUMBER: US 08/256,927

APPLICATION NUMBER: US 08/256,927

APPLICATION NUMBER: US 08/256,927

APPLICATION NUMBER: US 08/256,927

APPLICATION NUMBER: PCT/FR93/00085

FILING DATE: 28-JAN-1992

APPLICATION NUMBER: PCT/FR93/00085

FILING DATE: SB-JAN-1993

ATTORNEY/AGENT INFORMATION:

NAME: Smith Ph.D., Julie K.

REGISTRATION NUMBER: ST92006-US

TELEPHONE: (610) 454-3839

TELEPHONE: (610) 454-3839

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
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APPLICANT: Fleer, Reinhard
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 138 amino acids
TYPE: amino acid
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COMPUTER READABLE FORM:
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PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: P2/FR93/00085
FILING DATE: 31-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: S192006-US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
COUNTRY: USA
ZIP: 19426
                                                                                             OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,667
FILING DATE: 10.5ep-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-667-12
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
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US-10-237-708-12
Sequence 12, Application US/10237708
Publication No. US20030036170A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
APPLICANT: Fleer, Reinhard
     ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino scids
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                                                                         COMPUTER: Macintosh
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Best Local Similarity
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Gaps . 0

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Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 63
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                                                                                                                                                                                         PALLALION NUMBER: US/08/797,689
PELICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
PELING DATE: 28-UUL-1994
APPLICATION NUMBER: FR 92/01064
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: SMITH Ph.D., JULIE K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
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STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
                       OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                            FILING DATE: 10-Sep-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        %30-237-624-12

%Sequence 12, Application US/10237624

%Publication No. US20030082747A1

GENERAL INFORMATION:

APPLICANT: Fleer, Reinhard
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ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 138 amino acids TYPE: amino acid
  Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 PLVQECMVHDCADGK 135
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CORRESPONDENCE ADDRESS
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Matches 135; Conservative
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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34.5%; Score 793; DB 15;
Best Local Similarity 100.0%; Pred. No. 4.1e-62;
Matches 135; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY AGENT INPORMATION:
NAME: Smith Ph.D., Julie K.
REGISTATION UNBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INPORMATION:
TELEPROKE: (610) 454-3839
TELEFAX: (610) 454-3809
INPORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
             COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: WORD 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,866
FILING DATE: 10-Sep-2002
CLASSIFICATION ATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: WS 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: BR 92/01064
FILING DATE: 28-JUL-1992
APPLICATION NUMBER: CT/FR93/00085
FILING DATE: 28-JUL-1993
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; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-866-12
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CITY: Collegeville
STATE: PA
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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Publication No. US20030036172A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 138 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 PLVQECMVHDCADGK 135
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US-10-237-871-12
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OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,624
FILING DATE: 10-Sep-2002
CLASSIFICATION: «Unknown>
PRIOR APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: US 08/256,927
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: protein
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-624-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 12:
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Best Local Similarity 100.
Matches 135; Conservative
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Search completed: December 3, 2003, 15:05:43 Job time: 44.1951 secs

43, Appl 38, Appl 5185259 5200340 5244676 11, Appl 11, Ap

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Sequence 12, Application US/08797689
Fatent No. 587659
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
APPLICANT: Guitton, Jean-Dominique
APPLICANT: Jung, Gerard
APPLICANT: Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
TITLE OF INVENTION: CONTAINING SAID POLYPEPTIDES,
TITLE OF INVENTION: REPRARATION THEREOF AND PHARMACEUTICAL COMPOSITION
TITLE OF INVENTION: OFFICE STORMANDES
NUMBER OF SEQUENCES: 36
Patent No. 5520
Batent No. 5200
Sequence 43, A
Sequence 30, A
Sequence 38, A
Patent No. 5100
Patent No. 5200
Patent No. 5200
                                                                                                                                                                  Sequence 17,
Sequence 15,
Sequence 17,
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Sequence 17,
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Sequence 13,
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                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                      Sequence
                                                                                             5200340-2
5344773-2
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US-08-438-745-17
US-09-219-019-15
US-09-219-019-17
PCT-US94-05669A-15
PCT-US94-05669A-17
US-08-438-745-13
US-08-438-745-13
PCT-US94-05669A-13
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US-08-811-949-43
US-08-560-098A-50
US-08-883-795A-38
5185259-3
                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
   5520913-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
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TOPOLOGY: linear
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Sequence 96, Appl
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Sequence 48, Appli
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5219569
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Sequence 73, Appl
Sequence 98, Appl
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Sequence 18, App.
                                                                                                           December 3, 2003, 14:35:43; Search time 6.98276 Seconds (without alignments) 818.010 Million cell updates/sec
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1 SNELHQVPSNCDCLNGGTCV.....QVGLKPLVQECMVHDCADGK 135
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Patent No. 52
Sequence 1,
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Sequence 18
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(cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
               GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                              328717 segs, 42310858 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                               - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                           seq length: 0
seq length: 200000000
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Match Length
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Perfect score:
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Maximum DB :
                                                                                 protein
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                                                                                                                                                                                                               Sequence:
                                                                                                              Run on:
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Gaps

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61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                           Length 208;
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                                                                                                                                                                                                                                                                           100.0%; Score 793; DB 4;
100.0%; Pred. No. 4.6e-72;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/08087163
Fatent No. 547269
GENERAL INFORMATION:
APPLICANT: Liu, Jian-Ning
APPLICANT: Gurewich, Victor
TITLE OF INVENTION: PRO-UROKINASE MUTANTS
NUMBER OF SEQUENCES: 1
CORRESONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTY: U.S.A.

ZIP: 0110-2804

COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
COMPUTER: 1EM PS/2 Model 50Z or 55SX
OOPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WACTGETC (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/087,163
FILING DATE: 07/02/93
CLASSIFICATION DATA:
APPLICATION NUMBER: S14
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
ATTORNEY/AGENT INFORMATION:
NAMM: FASSE, U PETER
REGISTRATION NUMBER: 32,983
REFERENCE/DOCKET NUMBER: 04353/003001
TELECOMMUNICATION INFORMATION:
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SOFTWARE: PatentIn version 3.1
SEQ ID NO 98
LENGTH: 208
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity
Matches 135; Conserv
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                                                                                             Length 138;
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Sequence 73 Application US/09101272G

Patent No. 65094410N:
GENERAL INFORMATION:
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
CURRENT FILING DATE: 1998-07-08

PRIOR APPLICATION NUMBER: US/09/101,272G

CURRENT FILING DATE: 1996-01-08

NUMBER OF SEQ ID NOS: 107

SEQ ID NOS: 200

LENGTH: 200

LENGTH: 200
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APPLICANT: Nissin Food Products Co., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
FILE REPRENCE: Q50979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT FILING DATE: 1998-07-08
PRIOR PRILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107
                                                                                                                                                       0
                                                                                          100.0%; Score 793; DB 2;
100.0%; Pred. No. 2.9e-72;
tive 0; Mismatches 0;
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; OTHER INFORMATION: ATF domain of uPA
US-09-101-272G-73
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VS-09-1012-272G-98
Sequence 98, Application US/09101272G
Patent No. 6509445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 PLVQECMVHDCADGK 135
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                                                                                          Query Match 100.
Best Local Similarity 100.
Matches 135; Conservative
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      MOLECULE TYPE:
                ; MOLECULE TYI
US-08-797-689-12
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Query Match
100.0%; Score 793; DB 1; Length 411;
Best Local Similarity 100.0%; Pred. No. 9.9e-72;
Matches 135; Conservative 0; Mismatches 0; Indels (
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TELEX: 219484
INFORMATION FOR SEQ ID NO: 18:
121 PLVQECMVHDCADGK 135
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amino acid
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                                                                                                                                                                                                                                                                                                                                                            CITY: Murray Hill STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: US
ZIP: 07974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-153-799-18
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                                                                                                                                                  61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                      61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRPWCYVQVGLK 120
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                                                  1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
                      SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                RESULT 5
US-08-286-748B-18
Sequence 18, Application US/08286748B
Sequence 18, Application US/08286748B
Sequence 18, Application US/08286748B
GENERAL INFORMATION:
APPLICANT: Victor Gurewich
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DELIVERY
TITLE OF INVENTION: OF DRUGS BY PLATELETS FOR THE DELIVERY
TITLE OF INVENTION: CARDIOVASCULAR AND OTHER DISEASES
NUMBER OF SEQUENCES: 18
CORRESPONDENCES:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
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Best Local Similarity 100.0%; Pred. No. 9.9e-72;
Matches 135; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: 3.5" Diskette, 1.44 Mb COMPUTER: 18M PS/2 Model 50Z or 55SX OPERATING SYSTEM: MS-DOS (Version 5.0) SOFTWARE: WordPerfect (Version 5.1) CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/286,748B FILING DATE: AUGUSE 5, 1994 CLASSIFICATION: 424 PRIOR APPLICATION DATA: FILING DATE: FILING DATE: FILING DATE: APPLICATION DATA: APPLICATION NUMBER: FILING DATE: ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: J. Peter Fasse
REGISTRATION NUMBER: 32,983
REPERENCE/DOCKET NUMBER: 04547/013001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 200154
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                  121 PLVQECMVHDCADGK 135
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                                                                                                                                                                                                                    121 PLVQECMVHDCADGK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Boston
STATE: Massachusetts
COUNTY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: sir
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61 KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRPWCYVQVGLK 120
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RESULT 6
US-08-153-799-18
i Sequence 18, Application US/08153799
i Patent No. 5766683
i GENERAL INFORMATION:
i APPLICANT: Ballance, David J
APPLICANT: Ballance, David J
TITLE OF INVENTION: Polypeptides
i UNMBER OF SEQUENCES: 23
i CORRESPONDESSEE: ADDRESSE:
i ADDRESSEE: Riain Swope, BOC Health Care Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/153,799
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 793; DB 1;
Best Local Similarity 100.0%; Pred. No. 9.9e-72;
Matches 135; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA;
APPLICATION NUMBER: US 07/847975
FILING DATE: 06-MAR-1992
PRIOR APPLICATION DATA;
APPLICATION NUMBER: GB 8909916.2
FILING DATE: 29-APR-1989
PRIOR APPLICATION NUMBER: PCT/GB90/00650
FILING DATE: 29-ARR-1990
PRIOR APPLICATION NUMBER: US 07/775952
FILING DATE: 29-CCT-1991
ATTORNEY, AGENT INFORMATION:
NAME: SWODE, R HAIN
REGISTRATION NUMBER: 24864
REFERENCE/POCKET NUMBER: 92H832
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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APPLICANT: BLABER, MICHAEL;HEYNEKER, HERBERT L.;VEHAR,
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                                                                                                                                                                                                                                                    LENGTH: 430
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 79
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LOCATION: 198..203
COTHER INFORMATION: /label= modified
OTHER INFORMATION: /note= "six amino acids deleted in mutant"
US-07-942-157A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 793; DB 1; Length 430; Best Local Similarity 100.0%; Pred. No. 1e-71; Matches 135; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/942,157A
FILING DATE: 19920908
CLASSIFICATION: 435
PRIOR APPLICATION 1435
PRIOR APPLICATION NUMBER: US/07/631673
APPLICATION NUMBER: US 07/631673
APPLICATION NUMBER: US 07/631673
FILING DATE: 20-DEC-1990
ATTONNEY/AGENT INPORMATION:
NAME: PabSt, Patrea L.
REGISCRATION NUMBER: 31,284
REFRENCEY/DOCKET NUMBER: TS1108Cont.
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPRAK: (404)815-6555
                                      Sequence 3, Application US/07942157A
Patent No. 5648253
GENERAL INFORMATION:
APPLICANT: Wel, Cha-Mer
TITLE OF INVENTION: Inhibitor-Resistant Urokinase
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: KILPATENCE, & COdy
STREET: 1100 Peachtree Street Suite 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= peptide
/note= "WAP signal"
                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 30309-4530
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (404)815-6555
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 PLVQECMVHDCADGK 135
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TYPE: AMINO ACID
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein HYPOTHETICAL: NO
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OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: Peptide
                                                                                                                                                                                                                                          CITY: Atlanta
STATE: Georgia
                     -07-942-157A-3
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Best Local S
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RESULT 8 5219569-2 ;Patent No. 5219569

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGQQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 793; DB 6; Length 430;
Best Local Similarity 100.0%; Pred. No. 1e-71;
Matches 135; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 793; DB 4; Length 431; Best Local Similarity 100.0%; Pred. No. 1e-71; Matches 135; Conservative 0; Mismatches · 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: mat peptide
LOCATION: (21)...()
OTHER INFORMATION:
LOCATION: (20)...()
OTHER INFORMATION: Urokinase-type plasminogen activator (uPA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEGOLI 1-272G-1

Sequence 1, Application US/09101272G

Sequence 1, Application US/09101272G

Patent No. 650944

GENERAL INFORMATION:

TITLE OF INVENTION: CANCEROUS METASIS INHIBITOR

FILE REFERENCE: Q50979

CURRENT APPLICATION NUMBER: US/09/101,272G

CURRENT APPLICATION NUMBER: US/09/101,272G

PRIOR PILING DATE: 1996-01-08

NUMBER OF SEQ ID NOS: 107

SEQ ID NOS: 107

LENGTH: 431
GORDON A.

TITLE OF INVENTION: PROTEASE RESISTANT UROKINASE

NUMBER OF SEQUENCES: 6

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/766,858
FILING DATE: 16-AUG-1985
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 725,468
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 PLVQECMVHDCADGK 135
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 6; Length 431;
                                                                                              APPLICANT: KOBAYASHI, YO-ICHI;OMORI, MUNEKI;YAMADA, CHIKAKO TITLE OF INVENTION: RAPIDLY ACTING PROUROKINASE NUMBER OF SEQUENCES: 23 CURRENT APPLICATION DATA:
APPLICATION NUMBER: U5/07/340,007
FILING DATE: 18-AUG-1988
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100.0%; Pred. No. 1e-71;
ive 0; Mismatches 0; Indels
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Fatent No. 6509445
GENERAL INPORMATION:
APPLICANT: Nissin Food Products Co., Ltd.
ITLLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
FILE REFREENCE: Q50979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT APPLICATION NUMBER: US/09/101,272G
FRIOR APPLICATION NUMBER: JP 1059/1996
PRIOR APPLICATION NUMBER: JP 1059/1996
PRIOR APPLICATION NUMBER: JP 1059/1996
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Best Local Similarity 100.0
Matches 135; Conservative
                                                                   ;Patent No. 5188829
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US-09-101-272G-80
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RESULT 10
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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APPLICANT: MAZAR, Andrew P.
APPLICANT: MAZAR, Andrew P.
APPLICANT: JONES, Terence R.
TITLE OF INVENTION: CYCLIC EPPTIDE LIGANDS THAT TARGET UROKINASE
TITLE OF INVENTION: PLASMINOGEN ACTIVATOR RECEPTOR
FILE REFERENCE: 329042000300 SIDN 1-7
CURRENT APPLICATION NUMBER: US/09/181,816
CURRENT FILING DATE: 1998-10-29
NUMBER OF SEQ ID NOS: 7
SOFTWARE: PATENTIN VET. 2.0
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Sequence 96, Application US/09101272G
Patent No. 6509445;
GENERAL INFORMATION:
APPLICANT: Nissin Food Products Co., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR;
FILLS PREPRIED 1000 NUMBER: US/09/101,272G
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT FILING DATE: 1998-07-08
PRIOR APPLICATION NUMBER: US/09/1996
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.1
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Pred. No. 1e-70;
0; Mismatches 1
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; Sequence 1, Application US/09181816
; Patent No. 6277818
                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Artificial Seguence
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Best Local Similarity 99.3%;
Matches 134; Conservative
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Best Local Similarity 100.0
Matches 134; Conservative
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RESULT 12 US-09-101-272G-96

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61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
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1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 769; DB 3;
Pred. No. 8.5e-70;
0; Mismatches 4
                                                                                                                                                                                                                                                                      SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/142,590B
FILING DATE: 25-0CT-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/042,318
FILING DATE: 02-APR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Myers, Paul L.
REGISTRATION NUMBER: 35,965
REFERENCE/DOCKET INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157 amino acids
28 State Street
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internal
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                                                           Massachusetts
: USA
                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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FRAGMENT TYPE:
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                                                                                           COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
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Patent No. 6120765
GENERAL INFORMATION:
APPLICANT: HIBINO, Tashihiko; TAKAHASHI, Tadahito; HORII, Izumi; and TITLE OF INVENTION: UROKINASE PLASMINOGEN ACTIVATOR FRAGMENTS
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGOHCEIDKSKTCYEGNGHFYRG
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ZIF: 2005

ZIF: 2006

COMPUTER READABLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (BPO)
SOFTWARE: Patentin Release #1.0, Version #1.30 (BPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
RPLING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERRNCE/DOCKET NUMBER: 148/42448
TELECOMMONICATION INFORMATION:
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                                                                    Sequence 48 Application US/08560098A -

Batent No. 5976841

GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: WIELAND, Stephan

APPLICANT: STEFFENS, Gerd Josef

TITLE OF INVENTION: Proteins having Fibrinolytic and

TITLE OF INVENTION: Coagulation-inhibiting Properties

NUMBER OF SEQUENCES: 60

CORRESPONDENCE ADDRESS:

ADDRESSEE: Evenson, McKeown, Edwards & Lenahan

STREET: 1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
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Pred. No. 1.3e-70;
0; Mismatches 1;
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INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 411 amino acids
TYPE: amino acid
STRANDEDNESS: single
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Best Local Similarity 99.3
Matches 134; Conservative
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                          RESULT 14
US-08-560-098A-48
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47 SKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD 106
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 83, Application US/08720012
Patent No. 5747291
GENERAL INFORMATION:
APPLICANT: STEFFENS, GERD J.
APPLICANT: STEFFENS, JEPHAN
APPLICANT: SCHWIDDER, JOHANNES
APPLICANT: SCHWIDER, JOHANNES
APPLICANT: SCHWIDER, JOHANNES
APPLICANT: SCHWIDER, JEREK J.
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
UNDERR OF SEQUENCES: 83
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                              64.8%; Score 514; DB 1; Length 365; 100.0%; Pred. No. 7.9e-44; ive 0; Mismatches 0; Indels
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COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/720,012
FILING DATE: 27-SEP-1996
CCASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N. W. Suite 700
CITY: Washington, D.C.
COUNTRY: U.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107 NRRRPWCYVQVGLKPLVQECMVHDCADGK 135
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APPLICATION NUMBER: US 08/093,741
FILING DATE: 20-UUL-1993
APPLICATION NUMBER: US P43 23 754.1
FILING DATE: 15-UUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPh D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 148/41345
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
             REFERENCE/DOCKET NUMBER: 148/41345
                                TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)628-8844
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
LENGTH: 365 amino acids
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INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
                                                                                                                          LENGTH: 365 amino acids TYPE: amino acid
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Matches 89; Conservative
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                                                                                                                                                                                                                                                                                                Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 83, Application US/08093741
Patent No. 5681721
GENERAL INFORMATION:
APPLICANT: STEPFENS, GERD J.
APPLICANT: WINDER, JOHANNES
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: STEPFENS, GERD J.
TITLE OF INVENTION: BIFUNCTIONAL UROKINASE VARIANTS WITH
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
TITLE OF INVENTION: INHIBITING BFFECT
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40 CVTGEGTPKPESHNNGDPFEIPEFY-----LQISKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 515; DB 2; Length 432;
Pred. No. 7.6e-44;
8; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSER: Evenson, McKeown, Edwards & Lenahan STREET: 1200 G Street, N. W. Suite 700 CTY: Washington, D.C. COUNTRY: U.S. SIP: 2005 COUNTRY: U.S. SIP: 2005 COMPUTER READBLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/093,741 FILING DATE: 20-JUL-1993 CLASSIFICATION NUMBER: DE P43 23 754.1 FILING DATE: 15-JUL-1993 ATPONDATE: DE P43 23 754.1 FILING DATE: 15-JUL-1993 ATPONDATE: DE P43 23 754.1
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT UNPORMATION:
NAME: EVANS, JOSEPh D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8844
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 432 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: EVANS, Joseph D. REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 75.6%;
Matches 93; Conservative
                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 432 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-560-098A-47
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US-08-093-741-83
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64.8%; Score 514; DB 1; Length 365;

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                                                                 47 SKTCYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD 106
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                                                                                                        1 SKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD 60
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100.0%; Pred. No. 8.6e-44;
tive 0; Mismatches 0; Indels
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CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994

ATTORNEY/AGENT: NOV-1994

ATTORNEY/AGENT: NOV-1994

ATTORNEY/AGENT: DECREATION:

NAME: EVANS, JOSEPH D.

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET: NUMBER: 148/42448

TELECHONE: (202) 628-8800
100.0%; Pred. No. 7.9e-44;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                              Sequence 44, Application US/08560098A
Patent No. 5976841
GENERAL INFORMATION:
APPLICANT: WIENDY, Stephan
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Proteins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Evenson, McKeown, Edwards & Lenahan
1200 G Street, N.W., Suite 700
                                                                                                                                                      107 NRRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 NRRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                                                                                                                                                   NRRRPWCYVQVGLKPLVQBCMVHDCADGK 89
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
WEDIUM TYPE: Floppy disk
COMPUTER: IBM PC comparible
OPERATING SYSTEM: PC-DOS/MS-DOS
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; Sequence 24, Application US/08967024C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO: 44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 393 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100.
Matches 89; Conservative
                         Conservative
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MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 1200
  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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US-08-560-098A-44
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                         Matches
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47 SKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD 106
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| Patent No. 6133011
| GENERAL INFORMATION: Stephan APPLICANT: STEFFENS, Gerd Josef APPLICANT: STEFFENS, Gerd Josef APPLICANT: HANCHA, Elke APPLICANT: HEINZEL-WIELAND, Regina TITLE OF INVENTION: Chimeric Proteins having Fibrinolytic NUMBER OF SEQUENCES: 25 CORRESPONDENCE ADDRESS: ADDRESSE: Evenson, McKeown, Edwards & Lenahan STREET: 1200 G Street, N.W., Suite 700 CITY: Washington CITY: Washington
GENERAL INFORMATION:

APPLICANT: STEPENS, Gerd Josef
APPLICANT: JATEFENS, Gerd Josef
APPLICANT: JATEFENS, Gerd Josef
APPLICANT: JATEFENS, Gerd Josef
APPLICANT: JATEFENS, Gerd Josef
APPLICANT: JATEFENS, Gerd Josef
APPLICANT: JATEFENS, GERD SEGURAL OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
STREET: 1200 & Street, N.W., Suite 700
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 514; DB 3; Length 35:
Pred, No. 8.6e-44;
                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,024C
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 64.8%; Score 514; DB
1 Similarity 100.0%; Pred. No. 8.6
89; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107 NRRRPWCYVQVGLKPLVQECMVHDCADGK 135
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 42 665.8
APTICATION NUMBER: P 44 42 665.8
FILING DATE: 30-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REGISTRATION INFORMATION:
TELEPHONE: (202) 628-8849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 24: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
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Best Local Similarity
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STATE: DC
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43 EIDKSKTCYEGNGHFYRGKASTDTWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYC 102
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 SKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 514; DB 3; Length 393;
Pred. No. 8.6e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
MAME/KEY: misc_feature
OTHER INFORMATION: residues 43-131 of the ATF domain of uPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64.7%; Score 513; DB 4; Length 89; 100.0%; Pred. No. 2e-44; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                             CURRENT APPLICATION DATA: US/08/967,024C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 62, Application US/09101272G;
Sequence 62, Application US/09101272G;
GENERAL INFORMATION:
APPLICANT: Nissin Food Products Co., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR;
FILE REFERRING: 050979;
CURENT APPLICATION NUMBER: US/09/101,272G
CURRENT FILING DATE: 1998-07-08;
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107;
SOFTWARE: Patentin version 3.1
LENGTH: 89
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100.0%; Pred. No. co...
... 0; Mismatches
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                                                                                                                                                          PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 42 665.8
FILING DATE: 30-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REPERENCE/DOCKET NUMBER: 1186/42444
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (202) 628-8900
TELEPAX: (202) 628-8844
INPORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 393 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0
Matches 89; Conservative
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Matches 89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
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                                                                                                                                            FILING DATE
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Method for Altering Post-Translational Processing of Tissue I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 42.3%; Score 335.5; DB 2; Length 477; Best Local Similarity 46.3%; Pred. No. 8.3e-26; Matches 62; Conservative 17; Mismatches 50; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PATENTIN Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/560,098A
FILING DATE: 17-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                              APPLICANT: WRENDT, Stephan
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Coagulation-inhibiting Properties
TITLE OF INVENTION: Coagulation-inhibiting Properties
TITLE OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, MCKeown, Edwards & Lenahan
                                                                                                                                                                                                                                                                                                                                           3: Evenson, McKeown, Edwards & Lenahan
1200 G Street, N.W., Suite 700
61 RNPDNRRRPWCYVQVGLKPLVQECMVHDC 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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; Patent No. 5326700
; GENERAL INFORMATION:
                                                                                 US-08-560-098A-51
; Sequence 51, Application US/08560098A
· Parent No. 5976841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REPERENCE/DOCKET UNMER: 148/4
TELECOMMUNICATION INPORMATION:
TELEPHONE: (202) 628-8800
TELEPAX: (202) 628-8844
INPORMATION POR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119 LKPLVQECMVHDCA 132
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
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TITLE OF INVENTION: Met
NUMBER OF SEQUENCES: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                            Washington
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                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
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US-07-609-510B-16
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STATE:
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PCT-US91-01025A-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 41.4%; Score 328.5; DB 1; Length 527; Best Local Similarity 46.3%; Pred. No. 4.7e-25; Matches 63; Conservative 14; Mismatches 54; Indels 5;
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Patent No. 5840533
GENERAL INFORMATION:
APPLICANT: NAIM, MINEO
APPLICANT: SAITO, YOSHIMASA
APPLICANT: RASARKI, HITOSHI
APPLICANT: HAYASHI, MASAKO
APPLICANT: KOBAYASHI, MASAKO
APPLICANT: KOBAYASHI, MASAKO
TITLE OF INVENTION: TISSUE PLASMINOGEN ACTIVATOR
NUMBER OF SEQUENCES: 67
CORRESPONDENCE ADDRESS:
                                                                                                                                CONTITE READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.0 Mb storage COMPUTER: Macintosh Mcintosh SOFTWARE: Macintosh Most Mord CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/609,510B
FILING DATE: 19901106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/811,949
FILING DATE: 05-MAR-1997
                   ADDRESSEE: Eli Lilly and Company STREET: Lilly Corporate Center CITY: Indianapolis
                                                                                                                                                                                                                                                                                      FILING DATE: 19901106
CLASSIFICATION: 435
INFORMATION FOR SEQ ID NO: 16:
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                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 527 amino acids
TYPE: AMINO ACID
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
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US-08-811-949-39
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42 QCHSVPVKSCSEPRCFNGGTCQQALYFSDF-VCQCPEGFAGKCCEIDTRATCYEDQGISY 100
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TITLE OF INVENTION: Tissue Plasminogen Activator Having Fibrin
TITLE OF INVENTION: Tissue Plasminogen Activator Having Fibrin
TITLE OF INVENTION: Specific Properties
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                     41.4%; Score 328.5; DB 2; Length 527; 46.3%; Pred. No. 4.7e-25; tive 14; Mismatches 54; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IEM PC compatible COMPUTER: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENY APPLICATION DATA: PCT/US91/01025A FILING DATE: 19910214
                                                     18-966-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application PC/TUS9101025A GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/486,657
FILING DATE: 1 MAYCH 1990
ATTORNEY/AGENT INFORMATION:
NAME: Hasak, Janet E.
REGISTRATION NUMBER: 28,616
REFERENCE/DOCKET NUMBER: 454P2
TELECOMMUNICATION INFORMATION:
NAME: OBLON, NORMAN F.
REGISTRATION UNMBER: 24,618
REFERENCE/DOCKET NUMBER: 18-96
TELECOMMUNICATION INFORMATION:
TELEPONE: 3000
TELEPAX: 703-413-2220
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
LENGTH: 527 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119 LKPLVQECMVHDCADG 134
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
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LENGTH: 527 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                             63; Conservative
                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: protein
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                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
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CLASSIFICATION:
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PCT-US91-01025A-2
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                                                                                                                  42 QCHSVPVKSCSEPRCFNGGTCQQALYFSDF-VCQCPEGFAGKCEIDTRATCXEDQGISY 100
                                                                                                                                                                                   59 RGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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                                                                                        3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
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41.4%; Score 328.5; DB 6; Length 527;
Best Local Similarity 46.3%; Pred. No. 4.7e-25;
Matches 63; Conservative 14; Mismatches 54; Indels 5;
41.4%; Score 328.5; DB 5; Length 527;
46.3%; Pred. No. 4.7e-25;
tive 14; Mismatches 54; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: GOEDDEL, DAVID V.; KOHR, WILLIAM J.; PENNICA, DIANE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: ANDERSON, STEPHEN, BENNETT, WILLIAM F., BOTSTEIN.
DAVID, HIGGINS, DEBORAH L., PAONI, NICHOLAS F., ZOLLER, MARK J.
TITLE OF INVENTION: TISSUE PLASMINOGEN ACTIVATOR HAVING
SYMOGENIC PROPERTIES
NUMBER OF SEQUENCES: 35
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: TRUNCATED HUMAN TISSUE PLASMINGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTIVATOR

MUMBER OF SEQUENCES: 15

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/489,855

FILING DATE: 02-MAR-1990

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:
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FILING DATE: 06-JUL-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 770,510
FILING DATE: 03-OCT-1991
APPLICATION NUMBER: 384,608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 12,694
FILING DATE: 09-FEB-1997
APPLICATION NUMBER: 483,052
FILING DATE: 07-APR-1983
APPLICATION NUMBER: 398,003
FILING DATE: 14-JUL-1982
APPLICATION NUMBER: 374,860
FILING DATE: 05-MAX-1982
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                          Similarity 46.3% 53; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Patent No. 5185259
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       Query Match
Best Local 3
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5520913-1
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5185259-8
                                                    Matches
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                                                                                                                                                        DB 6; Length 527;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAPPLICANT: FOSTER, DONALD C.; MULVIHILL, EILEEN R.; O'HARA, ; PATRICK J.; PINGEL, KURT, YOSHITAKE, SHINJI TITLE OF INVENTION: THROMBIN-ACTIVATED TISSUE PLASMINOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
41.4%; Score 328.5; DB 6; Length
Best Local Similarity 46.3%; Pred. No. 4.9e-25;
Matches 63; Conservative 14; Mismatches 54; Indels
                                                                                                                                                    41.4%; Score 328.5; DB 6; Length 96.3%; Pred. No. 4.7e-25; Live 14; Mismatches 54; Indels
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1755 S. JEFFERSON DAVIS HIGHWAY, SUITE 400
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APPLICANT: SAITO, YOSHIMASA
APPLICANT: SASATI, HITOSHI
APPLICANT: HAYASHI, MASAKO
APPLICANT: HAYASHI, MASAKO
APPLICANT: NOTANI, JOUJI
APPLICANT: NOTANI, JOUJI
TITLLE OF INVENTON: TISSUE PLASMINOGEN ACTIVATOR
NUMBER OF SEQUENCES: 67
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/53,412
FILING DATE: 22-MAY-1987
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         APPLICATION NUMBER: 240,856
FILING DATE: 02-SEP-1988
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FILING DATE: 24-JUL-1989
                                                                                                                                                                            Local Similarity 46.39
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Patent No. 5200340
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                                                                                       LENGTH: 527
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                                                                                                                                                           Query Match
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                                                                 SEQ ID NO:1
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Matches
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59 RGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
41.4%; Score 328.5; DB 2; Length 562;
Best Local Similarity 46.3%; Pred. No. 5.1e-25;
Matches 63; Conservative 14; Mismatches 54; Indels 5,
CITY: ARLINGTON
STATE: VA

COUNTRY: USA

ZIP: 22202

COMPUTER READABLE FORM:

MEDIUM TYPE: Flopy disk

COMPUTER: Ibm PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/811,949
FILING DATE: 05-MAR-1997

CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: OBLON, NORMAN F.
REGISTRATION NUMBER: 18-966-0

TELECOMMUNICATION INFORMATION:
TELEPRAN: 703-413-2220
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
LENGTH: 562 amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
MALSCULE TYPE: protein
US-08-811-949-43

---A NO: 5.18-25;
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196 GKYSSEFCSTPACSEG 211
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Human uPA amino te
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Sequence encoded b
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| SIDS1/gggdata/geneseq_genesegp_embl/A41993.DAT:+
| SIDS1/gggdata/geneseq_genesegp_embl/A41996.DAT:+
| SIDS1/gggdata/geneseq_genesegp_embl/A41997.DAT:+
| SIDS1/gggdata/geneseq_genesegp_embl/A41999.DAT:+
| SIDS1/gggdata/geneseq_genesegp_embl/A41999.DAT:+
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GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
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## ALIGNMENTS

Human urokinase-type plasminogen activator amino terminal fragment (ATF). stroke, hypotension, atherosclerosis, heart attack, thrombotic disorder, microvascular occlusion, angiogenic disorder; pulmonary fibrosis, asthma; tumour cell metastasis; glaucoma; diabetic retinopathy; wound healing; clotting disorder; uterine contraction disorder; respiratory disease; adult respiratory distress syndrome; amino terminal fragment; ATF; Human; urokinase-type plasminogen activator; uPA; therapy; hypertension; AAE16545 standard; Protein; 135 AA. (first entry) 09-APR-2002 AAE16545; male RESULT 1 AAE16545 

Homo sapiens.

WO200197752-A2

27-DEC-2001.

13-JUN-2001; 2001WO-US18976

20-JUN-2000; 2000US-212874P.

(UYPE-) UNIV PENNSYLVANIA.

Higazi AA; DB, Cines

Thu Dec

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The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and angiogenic activity of a mammalian wascle, endothelial cell or tissue. The composition is used for treating stroke, bypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microangiopathies, surgically induced thrombotic disorders, angiogenic disorders, pulmonary fibrosis, asthma, tumour cell invasion, tumour cell angiogenesis, tumour cell metastasis, glaucoma, diabetic retinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory discress syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder as asthma, adult respiratory discress syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder sequence is human urokinase-type plasminogen activator (uPA) amino
                                                                                                                                               treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator
                                                                                                   Composition for modulating muscle cell and tissue contractility for
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WPI; 2002-122240/16.
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                                   N-PSDB; AAD27078
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The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and anglogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occludions, thrombotic microrangiopathies, surgically induced thrombotic disorders, angiogenic disorders, tumour cell metastasis, glaucoma, invasion, tumour cell angiogenesis, tumour cell metastasis, glaucoma, clabelic retinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distress syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder sequence is human urokinase-type plasminogen activator (uPA) amino terminal fragment (ATF) and connecting peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 KASTDTWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                   Composition for modulating muscle cell and tissue contractility for treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human, colon cancer, colon cancer antigen, diagnosis, detection, colorectal carcinoma, chromosome 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 793; DB 23; Length 143; 100.0%; Pred. No. 7.8e-52; cive 0; Mismatches 0; Indels 0;
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99US-0163280.
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                  Higazi AA;
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                                                         WPI; 2002-122240/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143 AA;
                                                                                   N-PSDB; AAD27082.
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                  Cines DB,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; urokinase-type plasminogen activator; uPA; therapy; hypertension; stroke; hypotension; atherosclerosis; heart attack; thrombotic disorder; stroke; hypotension; angiogenic disorder; pulmonary fibrosis; asthmatumour cell metastasis; glaucoma; diabetic retinopathy; wound healing; clotting disorder; uterine contraction disorder; respiratory disease; adult respiratory distress syndrome; amino terminal fragment; ATF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders in a patient's genome that affect the activity of P by expressing in a patient's genome that affect the activity of P by expressing in an active proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteinn. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. Additionals and AAB77789 represent sequences used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SNEIHQVPSNCDCLNGGTCVSNKYPSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 86
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                                                                                                                                                                                         Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention.
N.B. Pages 666 to 682 and page 7053 of the sequence listing were
missing at time of publication, meaning no sequences are present for
SEQ ID NO:1027 to 1052, 7921 and 7922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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    Rosen CA;
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                                                                                                                                                                                                                                                                                                                Claim 11; Page 7707-7708; 9803pp; English.
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Ruben SM, Barash SC, Birse CE,
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                                                                                WPI; 2001-235357/24.
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                                                                                                                      N-PSDB; AAH34897
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The invention relates to 2175 novel human ovarian antigens (ABP41054-CC ABP43228) and to cDNAs encoding them (ABQ54131-ABQ56305), and also encompasses polypeptides 90% identical and polynucleotides 95% identical to the sequences of the invention. The invention additionally relates to recombinant vectors and host cells comprising human ovarian antigen polynucleotides, antibodies against human ovarian antigen and the use of ovarian antigen polynucleotides and polypeptides in diagnosing, treating, prognosing or preventing various ovary and/or breast-related disorders. Such conditions include ovarian cancer and breast cancer, and metastist to tunours of ovarian or breast origin, reproductive system clisorders (e.g., infertility, disorders of pregnancy, anovulation, polycystic ovary syndrome, ovarian cysts, and dysmenorrhoea), endocrine disorders, infertility, disorders of pregnancy, anovulation, chock syndrome), inflammatory conditions (e.g., mastitis, cophoritis and varian disorders, incedimental and acquired incorders, incedimental and acquired conditions (e.g., anaemia) cardiovacular disorders. Incommental disorders, gastrointestinal disorders of unitnary system disorders, or opportitis, systemic lupus erythematosus, chock-related disorders, neurological disorders, gastrointestinal disorders and utinary system disorders. Ovarian antigen polypeptides and compounds which modulate ovarian antigen expression or activity. The polynucleotides may also be used in screening for compounds which collectides may also be used in screening for compounds which collectides may also be used an antigen polypeptides and the collectides may also be used in screening for compounds will descreen the apply, druggered antibodies useful in disease diagnosis, drug targeting and phenotyping. The present collectication, but was obtained in electronic format directly from WIPO cat fitp.wipo.int/pub/published_pot_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
                                                                                                                                                                                                                                                                                                                                  Isolated nucleic acid molecules encoding novel ovarian polypeptides, useful in the prevention, treatment and diagnosis of cancer (e.g. ovarian cancer), immune disorders, cardiovascular disorders and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 793; DB 23; Length 337; 100.0%; Pred. No. 1.6e-51;
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                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC.
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                                                                07-JUN-2001; 2001WO-US18569.
                                                                                                               07-JUN-2000; 2000US-209467P.
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Best Local Similarity
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                                                                                                                                                                                                                                                                 WPI; 2002-147878/
N-PSDB; ABQ54872.
                  03-JAN-2002.
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AAE16547 standard; Protein; 403 AA.

RESULT 5 AAE16547 AAP50871 standard; protein; 411 AA.

AAP50871

(first entry)

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Human urokinase-type plasminogen activator scuPA deltal36-143 mutant.
                                                                            N-PSDB; AAD27080
                                            WO200197752-A2
                                     Homo sapiens.
       09-APR-2002
                                       Synthetic.
                                                                     Cines DB,
                                                                                                                                       Sequence
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61 KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120 1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60 1 SNEIHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG Zymogen AAP50871 is the inactive precursor form of human urokinase. Urokinase zymogen is cleaved into the two-chain form composed of characteristic urokinase H (molecular wt.of 30,000) and L (molecular wt.of 20,000) and L decular wt.of 20,000 and L decular The patentors claim a new urokinase zymogen which has mol. wt. ca. 50,000, a single chain molecular structure, and selective affinity for fibrin. It is a thrombolytic agent which manifests its plasminogen activator activity on cleavage by proteolytic enzymes (e.g. plasmin) and has higher affinity for fibrin than known forms Thrombolytic agent; plasminogen activator activity; fibrin affinity; /note= "potential cleavage site which generates
the two-chain form from the zymogen" Sequence encoded by cDNA sequence for human urokinase zymogen (Japanese Patent Application No.37119/84). Length 411; 0; Indels Ä New urokinase zymogen - useful as thrombolytic agent 100.0%; Score 793; DB 6; 100.0%; Pred. No. 1.9e-51; ive 0; Mismatches 0; Nishhida M, Location/Qualifiers Disclosure; Page 12; 30pp; English. Α, 83JP-0170354 84EP-0306117 83JP-0195051 Mori (first entry) 189..205 197..268 293..362 325..341 352..380 (GREC ) GREEN CROSS CORP. Matches 135; Conservative 71..113 Kasai S, Arimura H, WPI; 1985-106530/18 Query Match Best Local Similarity 411 AA; Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Disulfide-bond Cleavage-site urokinase. 07-SEP-1984; Homo sapiens. .7-0CT-1983; 13-SEP-1983; 02-MAY-1985. 30-NOV-1991 EP139447-A. Sequence g ઠ ò The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microangiopathies, surgically induced thrombotic invasion, tumour cell angiogenesis, pulmonary fibrosis, asthma, tumour cell angiogenesis, tumour cell metastasis, glaucoma, disorder, male impotence, respiratory disease or condition contraction disorder, male impotence, respiratory disease or condition width chronic intrapulmonary fibrin formation. The present sequence is human urokinase-type plasminogen activator (UPA) single chain urokinase (scuPA) deletion mutant designated as scuPA deltal36-143. ö 120 Human; urokinase-type plasminogen activator; uPA; therapy; hypertension; stroke; hypotension; atherosclerosis; heart attack; thrombotic disorder; pulmoravy aftbrosis, asthmancrovascular occlusion; angiogenic disorder; pulmonary fibrosis, asthma; tumour cell metastasis; glaucoma; diabetic retinopathy; wound healing; clotting disorder; userine contraction disorder; respiratory disease; male impotence; adult respiratory distress syndrome; scuPA deltal36-143; KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120 9 9 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRPWCYVQVGLK 1 SNELHOVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG SNETHOVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG Gaps Composition for modulating muscle cell and tissue contractility for treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator -., 100.0%; Score 793; DB 23; Length 403; 100.0%; Pred. No. 1.9e-51; Indels 0; Mismatches single chain urokinase; mutant; mutein. Claim 22; Fig 1F; 117pp; English PLVQECMVHDCADGK 135 PLVQECMVHDCADGK 135 13-JUN-2001; 2001WO-US18976 20-JUN-2000; 2000US-212874P (UYPE-) UNIV PENNSYLVANIA. Query Match
Best Local Similarity 100.
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                   Human, prourokinase; hPUK; variant; half-life; increase; EGF; epidermal growth factor domain; deletion; thrombolysis; fibrinolysis.
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/note= "in Claimed variants, at least part of the
EGF domain is deleted (see comments)"
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/label= second_loop
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Tanabe T;
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/label= first_loop
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/label= third loop
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87JP-0036495.
89JP-0126434.
                                  121 PLVQECMVHDCADGK 135
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89JP-0126433.
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18-FEB-1987;
18-MAY-1989;
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18-MAY-1989;
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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  Length 411;
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100.0%; Score 793; DB 11;
100.0%; Pred. No. 1.9e-51;
ive 0; Mismatches 0;
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(first entry)
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                                                Conservative
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04-OCT-1990
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100.0%; Score 793; DB 11; Length 411;

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121 PLVQECMVHDCADGK 135
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                                                                                                                                                                                                                                                    Urokinase precursor; fibrinolysis; thrombolytic; cerebral thrombosis; myocardial infarction;
                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  By forming a precursor-lipid composite, the half-life of this thrombolytic agent in the blood may be increaced, exhibiting improved activity without abnormal acceleration of fibrinolytic activity. Compound is useful as a thrombolytic agent in treatment of cerebral thrombosis, myocardial infarction etc.
                  0;
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     Pred. No. 1.9e-51;
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100.0%; Pred. No. 1.9e-51;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UK-T4 is one example of a plasminogen activator which differs from natural human pro-urokinase at positions 153 and 155 (Leu substituted by Ser; Pro substituted by Thr. respectively). The derivative has decreased susceptibility to thrombin compared to natural type pro-UK and higher specific activity.
                                                                                                                                                                                                       UK-T4; plasminogen activator; myocardial infarction;
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                                                                                                                                                    Pro-urokinase derivative UK-T4 with Ser(153) and Thr(155).
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100.0%; Pred. No. 1.9e-51;
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AAR10057 standard; Protein; 411 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (KYOW ) KYOWA HAKKO KOGYO KK.
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                                                                                                    (first entry)
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                                                                                                                                                                                                    pro-urokinase; UK-T<
cerebral thrombosis.
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N-PSDB; AAQ10169.
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ID AAR10
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KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human pre-urokinase can be modified by replacing: Ser, Asn, Pro, Gly, or Tyr in the region ranging from residue 10 to 60 in the N-terminal of the human PUR by Thr, Pro or Ala. These mutants have a longer half-life in the blood and a higher thrombolytic ability.
      "Ser, Asn, Pro, Gly, or Tyr in the region 10 to 60 in the N-terminal of the human PUK can be replaced by Thr, Pro or Ala"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mutant human pre:urokinase - by replacing specified aminoacid(s) in N-terminal for providing longer half-life in blood and higher thrombolytic ability
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                                                                "Thr encoded by AGT (sic)"
                                                                                              "Thr encoded by TAC (sic)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 793; DB 14;
100.0%; Pred. No. 1.9e-51;
ive 0; Mismatches 0;
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                                                                                                            10..49
/label= EGF
10..19
/label= Loop_1
20..31
/label= Loop_2
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/label= Loop_3
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(first entry)
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Best Local Similarity 100.
Matches 135; Conservative
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      /note=
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N-PSDB; AAQ48228.
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                                                                            Misc-difference
                                                 Misc-difference
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21-SEP-1995
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                                                         pro-urokinase; UK-S3; plasminogen activator; myocardial infarction; cerebral thrombosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UK-S3 is one example of a plasminogen activator which differs from natural human pro-urokinase at positions 153 and 155. (Leu substituted by Asn; Pro substituted by Thr, respectively). The derivative has decreased susceptibility to thrombin compared to natural type pro-UK and higher specific activity.
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                                                                                                                                                                                                                                                                                                                                                                New plasminogen activator almost identical to natural pro:urokinase - is thrombin resistant and used for prophylaxis, treatment of cerebral thrombosis or myocardial
                           Pro-urokinase derivative UK-S3 with Asn(153) and Thr(155)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pre-urokinase; thrombolytic; blood; plasmid; PUK.
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                                                                                                                                                                                                                                                           (KYOW ) KYOWA HAKKO KOGYO KK
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(first entry)
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Best Local Similarity 100.
Matches 135; Conservative
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                                                                                                                                                                                              18-JUN-1990;
                                                                                                        Homo sapiens
                                                                                                                                                                                                                            19-JUN-1989;
18-MAR-1991
                                                                                                                                                                   02-JAN-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
                                                            Pro-urokinase; thrombolysis; fibrin clot lysis; mutant Ala300; reduced fibrinogenolysis; non-specific plasminogen activation; systemic bleeding.
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100.0%; Pred. No. 1.9e-51;
ive 0; Mismatches 0;
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/note= "flexible loop"
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                      Pro-urokinase mutant Ala300.
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Best Local Similarity 100.
Matches 135; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
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.== "flexible loop"
                                        Location/Qualifiers
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                  AAR62993 standard; protein; 411 AA.
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Best Local Similarity 100.0%; Pred. No. 1.9e-51;
Matches 135; Conservative 0; Mismatches 0; Indels 0;
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94WO-US07278
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reduced fibrinogenolysis; non-specific plasminogen activation;
mutant His300 Ala301; systemic bleeding.
                                                Length 411;
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Pred. No. 1.9e-51;
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                                                                           SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGQQHCEIDKSKTCYEGNGHFYRG 60
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/note= "flexible loop"
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KASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                            AAR62991 is the wild type pro-urokinase, from which the new mutants described in AAR62992-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the treatment of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing tystemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
                Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
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                                                                                                                                                                                                                          Score 793; DB 16; Length 411;
Pred. No. 1.9e-51;
; Mismatches 0; Indels 0
                                                                                                                                                                                                              100.0%; Scor.
100.0%; Pred. No. ...
0; Mismatches
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/note= "flexible loop"
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                                                     Claim 13; Fig 1; 46pp; English.
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Best Local Similarity 100.
Matches 135; Conservative
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21-SEP-1995
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described in AAR62992-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the treatment of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                            100.0%; Score 793; DB 16; Length 411;
100.0%; Pred. No. 1.9e-51;
tive 0; Mismatches 0; Indels 0
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/note= "flexible loop"
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(first entry)
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                                                                                                                                  AAR62991 is the wild type pro-urokinase, from which the new mutants described in AAR62992-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the retainent of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                 Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
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                   (NEWE-) NEW ENGLAND DEACONESS HOSPITAL.
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                                                                                                                  Claim 11; Fig 1; 46pp; English.
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93US-0087163
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Best Local Similarity 100.0
Matches 135; Conservative
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197..268
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                                                             WPI; 1995-060991/08.
                                          Liu J;
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21-SEP-1995
                                        Gurewich V,
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                 (NEWE-) NEW ENGLAND DEACONESS HOSPITAL.
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/note= "flexible loop"
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94WO-US07278.
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297..313
/---- "flexible loop"
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reduced fibrinogenolysis; non-specific plasminogen activation;
systemic bleeding; mutant Ser175 His187 Ala313.
                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 793; DB 16; Length 411; 100.0%; Pred. No. 1.9e-51;
                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
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                                                                                                                                                                (NEWE-) NEW ENGLAND DEACONESS HOSPITAL
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(first entry)
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                                                                                                                                                                                     Gurewich V, Liu J;
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Best Local Similarity
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        Disulfide-bond
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                                                                                                                            28-JUN-1994;
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21-SEP-1995
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KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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llarity 100.0%; Pred. No. 1.9e-51;
Conservative 0; Mismatches 0;
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93US-0087163
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Key Domain

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61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                        Pro-urokinase; thrombolysis; fibrin clot lysis;
reduced fibrinogenolysis; non-specific plasminogen activation;
systemic bleeding; mutant Ser175 His187 His313.
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297..313
/note= "flexible loop"
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                                (updated)
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Pro-urokinase; thrombolysis; fibrin clot lysis; reduced fibrinogenolysis; non-specific plasminogen activation; systemic bleeding; mutant Ser175 His187 Gly306.
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/note= "flexible loop"
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                                                                                                        Location/Qualifiers
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Best Local Similarity 100.
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189..205
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325..380
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AAR62991 is the wild type pro-urokinase, from which the new mutants described in AAR62992-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the treatment of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lypis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                Pro-urokinase; thrombolysis; fibrin clot lysis; reduced fibrinogenolysis; non-specific plasminogen activation; systemic bleeding; mutant Ser175 His187 Gly306 Ala313.
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/-re= "flexible loop"
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                                                           AAR63004 standard; protein; 411
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PLVQECMVHDCADGK 135
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71..113
102..126
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21-SEP-1995
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                                                                                   AAR63004;
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                                                AAR63004
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AAR62991 is the wild type pro-urokinase, from which the new mutants described in AAR6292-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the retained treatment of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                      Pro-urokinase; thrombolysis; fibrin clot lysis; reduced fibrinogenolysis; non-specific plasminogen activation; systemic bleeding; mutant Serl75 His187 Ala300 Ala301 Ala313.
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/note= "flexible loop"
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                         AAR63005 standard; protein; 411 AA.
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100.0%; Score 793; DB 16; Length 411; 100.0%; Pred. No. 1.9e-51; .ive 0; Mismatches 0; Indels 0

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61 KASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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actvity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                        100.0%; Score 793; DB 16;
100.0%; Pred. No. 1.9e-51;
ive 0; Mismatches 0;
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/note= "flexible loop"
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                                                                                          Query Match 100.
Best Local Similarity 100.
Matches 135; Conservative
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                                                         SNEIHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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activation
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reduced fibrinogenolysis; non-specific plasminogen activation;
systemic bleeding; mutant Serl75 His187 His300 Ala301 Ala313.
        100.0%; Score 793; DB 16; Length 411;
100.0%; Pred. No. 1.9e-51;
.ive 0; Mismatches 0; Indels 0;
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/note= "flexible loop'
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                           AAR62991 is the wild type pro-urokinase, from which the new mutants described in AAR62992-R63008 were derived. These mutants retain the thrombolytic activity of the wild type protein, useful for the treatment of thromboembolism, but have a reduced fibrinogenolysis activity and non-specific plasminogen activation. The mutants can therefore be used for the lysis of fibrin clots without inducing systemic bleeding, as can be the case with the wild type protein. (Updated on 25-MAR-2003 to correct PN field.)
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100.0%; Pred. No. 1.9e-51;
tive 0; Mismatches 0;
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/note= "flexible loop"
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              Claim 16; Fig 1; 46pp; English.
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                                            Pro-urokinase mutants - have thrombolytic activity but reduced fibrinogenolysis activity and non-specific plasminogen activation
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100.0%; Pred. No. 1.9e-51;
ative 0; Mismatches 0;
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Compugen Ltd.
 GenCore version (c) 1993 - 2003
             Copyright
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- protein search, using sw model OM protein

3, 2003, 14:34:58 ; Search time 6.98276 Seconds
(without alignments)
1859.261 Million cell updates/sec December Run on:

US-09-880-503-4 793 1 SNELHQVPSNCDCLNGGTCV......QVGLKPLVQECMVHDCADGK 135 score: Sequence: Title: Perfect

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 sed Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 76:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description				u-plasminogen acti	u-plasminogen acti		t-plasminogen acti	t-plasminogen acti	u-plasminogen acti		t-plasminogen acti	t-plasminogen acti		t-plasminogen acti	t-plasminogen acti	plasma hyaluronan-	hepatocyte growth	plasma hyaluronan-	coagulation factor	coagulation factor	t-plasminogen acti	coagulation factor	neurotrophic recep	apoprotein(a) (EC	protei		plasmin (EC 3.4.21	phic re	plasmin (EC 3.4.21
SUMMARIES	ΩI	UKHU	UKBAY	UKPG	JN0560	S18932	UKMS	A34369	780598	A35005	138098	JS0599	UKHUT	A35029	A29941	JS0597	JC5878	A46688	JC4795	S28941	KFHU12	JS0600	845281	A48289	800657	A32869	C61545	E61545	45	B61545
	DB	i	1	Н	Н	Н	ч	Н	0	Н	7	Ŋ	н	Н	Н	7	Ŋ	Н	Н	N	٦	7	N	Н					7	7
	Length	431	433	442	433	432	433	477	477	434	291	431	562	559	559	477	558	655	560	603	615	394	593	685	4548	1420	123	120	937	460
	% Query Match	100.0	90.0	76.7	73.0	72.0	69.1	42.3	42.3	42.2	41.4	41.4	41.4	40.5	39.8	39.5	33.4	32.8	32.5	32.4	29.4	28.1	27.4	21.3	20.5	20.3	20.2	20.1	20.0	19.9
	Score	793	713.5	608	579	571	548	335.5	335.5	334.5	328.5	328.5	328.5	321.5	315.5	310.5	264.5	260.5	257.5	257	233	223	217	169	162.5	161	160	159	58.	157.5
	ssult No.		7	m	4	Ŋ	9	7	80	6	10	11	12	13	14	15	16	17	18	13	20	21	22	23	24	25	56	27	28	7

plasmin (EC 3.4.21				plasmin (EC 3.4.21		plasmin (EC 3.4.21	neurotrophic recep	plasmin (EC 3.4.21	hypothetical prote	macrophage-stimula	plasmin (EC 3.4.21	hepatocyte growth	hepatocyte growth	hepatocyte growth	macrophage-stimula
PLBO	PLPG	A60140	ытна	146260	B30848	A40522	B45082	PLMS	T18840	A47136	A61545	JH0579	151285	151283	A40332
Н	ч	7	Ä	~	N	N	~1	ч	7	Н	~	н	7	٦	7
812	790	83	810	810	810	169	943	812	908	711	455	728	411	710	716
19.7	19.5	19.4	19.4	19.4	19.2	19.2	18.7	18.5	18.2	18.2	17.8	17.8	17.8	17.8	17.5
156	155	154	154	153.5	152.5	152	148	147	144.5	144	141.5	141.5	141	141	139
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

## ALIGNMENTS

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S	7

u-plasminogen activator (EC 3.4.21.73) precursor [validated] - human N;Alternate names: cellular plasminogen activator; urokinase; urokinase-type plasminog N;Contains: urokinase-type plasminogen activator chain A; urokinase-type plasminogen a

C;Species: Homo sapiens (man)
C;Date: 17-Dec-1982 #sequence\_revision 04-Dec-1986 #text change 15-Sep-2000
C;Date: 17-Dec-1982 #sequence\_revision 04-Dec-1986 #text change 15-Sep-2000
C;Accession: A00331; 152209; JT0102; A37561; I38102; 865783; A37562; A37563; A37564; A R;Aiccio, A.; Grimaldi, G.; Verde, P.; Sebastio, G.; Boast, S.; Blasi, F.
Nucleic Acids Res. 13, 2759-2771, 1985
A;Title: The human urokinase-plasminogen activator gene and its promoter.
A;Reference number: A00931; MUID:85215647; PMID:2987867

A,Accession: A00931
A,Molecule type: DNA
A,Residues: 1-431 <RIC>
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A,Residues: 1-431 <RIC>
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A,Arcross-references: B8.X02419; NID:g37601; PIDN:CAA26268.1; PID:g1834524
A,Note: the authors translated the codon ATG for residue 214 as Ile
R,Nagamine, Y.; Pearson, D.; Grattan, M.
Biochen: Biophys. Res. Commun. 132, 563-569, 1988
A,Title: Exon-intron boundary sliding in the generation of two mRNAs codi
A,Accession: 152209
A,Accession: 152209

two mRNAs coding for porcin

A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 145-161 <NAGI>
A;Residues: 145-161 <NAGI>
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B;Nagai, M.; Hiramatsu, R.; Kaneda, T.; Hayasuke, N.; Arimura, H.; Nishida, M.; Suyama Gene 36, 183-188, 1985
A;Title: Molecular cloning of cDNA coding for human preprourokinase.
A;Reference number: JT0102; MUID:86056954; PMID:2415429

A;Accession: JT0102

A; Molecule type: mRNA

A;MOLECLLE Lype: mcA...
A;Residues: 1-213,'1',215-431 <NAG2>
A;Residues: 1-213,'1',215-431 <NAG2>
A;Cross-references: GB:R03226; NID:g340155; PIDN:AAC97138.1; PID:g340158; GB:D00244; N
A;Cross-references: GB:R03226; NID:g340155; PIDN:AAC97138.1; PID:g340158; GB:D00244; N R. Verde, P.; Stoppelli, M.P.; Galeffi, P.; Di Nocera, P.; Blasi, F. Proc. Natl. Acad. Sci. U.S.A. 81, 4727-4731, 1984
A;Title: Identification and primary sequence of an unspliced human urokinase poly(A) + A;Reference number: A37561; MUID:84272706; PMID:6589620
A;Accession: A37561

A; Molecule type: mRNA
A; Residues: 66-411 < VERS
A; Cross-references: GB: D00244; NID: g220138
R; Jacobs, P.; Cravador, A.; Loriau, R.; Brockly, F.; Colau, B.; Chuchana, P.; van Else: DNA 4, 139-146, 1985
A; Title: Molecular cloning, sequencing, and expression in Escherichia coli of human prakeference number: 138102; MUID: 85203359; PMID: 3888571
A; Accession: 138102

A;Status: preliminary A;Molecule type: mRNA A;Residues: 1-150, W, 152-213,'I',215-385,'C',387-429,'V',431 <JAC> A;Cross-references: EMBL:X02760; NID:g35297; PIDN:CAA26535.1; PID:g35298

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A. Residues: 1-433 <AUY>
A. Residues: 1-433 <AUY>
A. Residues: 1-433 <AUY>
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A. Cross-references: EMBL: X51935; NID:g38130; PIDN:CAA36200.1; PID:g38131
C. Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; C. Reywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
C. Keywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80 KASTDIMGRSCLAWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 KASTDTWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;322/Binding site: carbohydrate (Asn) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     324/Binding site: carbohydrate (Āsn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 793; DB 1;
; Pred. No. 3.2e-64;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 4.8e-57;
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Best Local Similarity 91.9%;
Matches 124; Conservative '
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Best Local Similarity
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R.Yoshimoto, M.; Ushiyama, Y.; Sakai, M.; Tamaki, S.; Hara, H.; Takhabahi, K.; Sawasaki, A. Takhim is Spoys, Acta 1239, 1399, 1499 uokitase-type plasminogen activator with a no A. Title: Characterization of single chain uniques of the control of single chain uniques of the control of the control of single chain uniques of the control of single chain uniques of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the
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A, Pathway: fibrinolysis
C, Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; try
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A,Gene: GDB:PLAU
A,Cross-references: GDB:119497; OMIM:191840
A,Map position: 10q24-10q24
A;Introns: 19/3; 29/1; 65/1; 123/2; 154/1; 227/2; 277/1; 324/1; 373/3
C;Function:
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1;

Indels

120

9 80

Gaps

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Indels

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A, Experimental source: tissue kidney
R, Henderson, B.R.; Tansey, W.P.; Phillips, S.M.; Ramshaw, I.A.; Kefford, R.F.
G-cor Res. 52, 2489-2496, 1992.
A, fitle: Transcriptional and posttranscriptional activation of urokinase plasminogen at A, Reference number: 160186; MUID:92233409; PMID:1568219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NiAlternate names: plasminogen activator, urokinase-type, urinary plasminogen activato: C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 18-Oct-1899 #sequence revision 10-Feb-1995 #text_change 18-Jun-1999
C;Accession: S24604; I60186; Ī53472; S18932
R;Rabbani, S.A.
Sabili Data Library, April 1992
A;Reference number: S24604
A;Accession: S24604
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C;Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; t:
C;Superfamily: urokinase-type plasminogen sctivator; serine proteinase
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-177/Product: urokinase-type plasminogen activator chain A #status predicted <ACH>
F;31-62/Domain: EGF homology <EGF>
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F;70-151/Domain: kringle homology <KRG>
F;179-432/Product: urokinase-type plasminogen activator chain B #status predicted <BCH:
F;179-420/Domain: trypsin homology <TRY>
F;179-420/Domain: trypsin homology <TRY>
F;168-300,210-226,218-289,314-383,346-362,373-401/Disulfide bonds: #status predicted
F;255,276,377/Active site: His, Asp, Ser #status predicted
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A, Cross-references: BMBL:K63434; NID:957465; PIDN:CAA45028.1; PID:957466
A, Experimental source: strain Fischer 344; tissue mammary
R, Ragno, P.; Cassano, S.; Degen, J.; Kessler, C.; Blasi, F.; Rossi, G.
FEBS Lett. 306, 193-198, 1992
A, Title: The receptor for the plasminogen activator of urokinase type is up-regulated
A, Reference number: 153472; MUID:92339549; PMID:1321734
F;72-153/Domain: kringle homology <KRG>
F;181-433/Product: plasminogen activator chain B #status predicted <MA2>
F;181-421/Domain: trypsin homology <TRY>
F;181-421/Domain: trypsin homology <TRY>
F;170-301,211-227,219-290,315-384,347-363,374-402/Disulfide bonds: #status predicted
F;226,277,378/Active site: His, Asp, Ser #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 SNEVHKESGESNCGCLINGGKCVTYKYFSNIQRCSCPKKFQGEHCEIDTSKTCYQGNGHSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 SNELHOV---PSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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A;Cross-references: EMBL:X66907; NID:g396200; PIDN:CAA47356.1; PID:g938279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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A;Residues: 1-15,'H',17-23,'G',25-331,'N',333-432 <RAB>
A;Cross-references: EMBL:X65651; NID:g57456; PIDN:CAA46601.1; PID:g57457
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                                                                                                                                                                                                                                                                             73.0%; Score 579; DB 1; 73.0%; Pred. No. 6.6e-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Accession: 160186
A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                             13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKPLVQECMVHDCADGK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141 LKQFVQFCMVQDCSVGK 157
                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 73.09
Matches 100; Conservative
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Best Local S
Matches 98
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A;Reference number: JN0560; MUID:93216119; PMID:8385052
A;Accession: JN0560
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A; Residues: 1-433 <KRA>
A; Residues: 1-433 <KRA>
A; Cross-references: GB:L03546; NID:g163800; PIDN:AAA51419.1; PID:g163801
C; Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; tr
C; Keywords: glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-179/Product: plasminogen activator chain A #status predicted <MA1>
F;21-179/Product: urokinase-type plasminogen activator chain A #status predicted <ACH>
F;33-64/Domain: EGF homology <EGF>
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                                                                                                                                                              u-plasminogen activator (EC 3.4.21.73) precursor - pig
N.Alternate names: uPA
C.Species: Sus scrofa domestica (domestic pig)
C.Species: Sus scrofa domestica (domestic pig)
C.Species: O4-Dec-1986 #sequence_revision 17-Mar-1987 #text_change 07-Aug-1998
C.Saccession: A00932
R.Magamine, Y.; Pearson, D.; Altus, M.S.; Reich, E.
Nucleic Acids Res. 12, 9525-9541, 1984
A.Title: cDNA and gene nucleotide sequence of porcine plasminogen activator.
A;Reference number: A00932, MUID:85087954; PMID:6096832
A;Mccession: A00932
A;Residues: 1-240,'H', 242-442 <NAGI>
A;Residues: 1-240,'H', 242-442 <NAGI>
R;Residues: 1-240,'H', 242-442 <NAGI>
R;Residues: 1-240,'H', 242-442 <NAGI>
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R;Residues: 1-240,'H', 242-442 <NAGI
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78.1%; Pred. No. 1.6e-47;
tive 11; Mismatches 17; Indels
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g à g à В

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Valuernate names: tissue plasminogen activator Common vampire bat)
C;Species: Desmodus rotundus (common vampire bat)
C;Species: Desmodus rotundus (common vampire bat)
C;Species: Desmodus rotundus (common vampire bat)
C;Species: Jankar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
C;Accession: J69598
R;Kraetzschmar, J; Haendler, B; Langer, G; Boidol, W; Bringmann, P; Alagon, A; D; Aritle: The plasminogen activator family from the salivary gland of the vampire bat D; A;Title: The plasminogen activator family from the salivary gland of the vampire bat D; A;Residues: 1-477 cKRA>
A;Residues: 1-477 cKRA>
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A;Residue
                                                                                                                                           A, Accession: A34369
A, Status: preliminary
A, Molecule type: mRNA
A, Molecule type: mRNA
A, Molecule type: mRNA
A, Molecule type: mRNA
A, Residues: 1-477 < GAR>
A, Cross-references: GB:J05082; NID:g166080; PIDN: AAA31596.1; PID:g166081
C, Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hc
C, Superfamily: tissue plasminogen activator as tringle; serine proteinase
F;1-21/Domain: signal sequence #status predicted < SIG>
F;2-36/Domain: propeptide #status predicted < PRO>
F;37-477/Product: plasminogen activator #status predicted < PLA>
F;87-177/Product: plasminogen activator #status predicted < PLA>
F;87-179/Domain: EGF homology < EGF>
F;87-120/Domain: kinjagle homology < KRG>
F;226-471/Domain: kringle homology < TRY>
F;226-471/Domain: trypsin homology < TRY>
F;226-471/Domain: trypsin homology < TRY>
F;226-471/Domain: trypsin homology < RRO>
F;226-471/Domain: trypsin homology < RRO>
F;226-471/Domain: trypsin homology < RRO>
F;226-471/Domain: trypsin homology < TRY>
F;2272,321,428/Active site: His, Asp, Ser #status predicted
J. Biol. Chem. 264, 17947-17952, 1989
A.Title: Isolation, characterization, and cDNA cloning of a vampire bat salivary plasm:
A;Reference number: A34369; MUID:90036867; PMID:2509450
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 BLHQVP----SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCBIDKSKTCYEGNGHFY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42.3%; Score 335.5; DB 1;
46.3%; Pred. No. 6.7e-23;
w.cmatches 50;
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t-plasminogen activator (EC 3.4.21.68) precursor - false vampire bat (Megaderma lyra)
C;Species: Megaderma lyra
C;Species: Megaderma lyra
C;Date: 10.Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accesion: A34369
R;Gardell, S.J.; Duong, L.T.; Diehl, R.E.; York, J.D.; Hare, T.R.; Register, R.B.; Jacob
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A, Residues: 1-433 < DEG>
A, Residues: 1-433 < DEG>
A, Cross-references: GB: MI7922; NID: g202296; PIDN: AAA40539.1; PID: g202297
R; Belin, D.; Vassalli, J.D.; Combepine, C.; Godeau, F.; Nagamine, Y.; Reich, E.; Kocher,
R; Belin, D.; Vassalli, J.D.; Combepine, C.; Godeau, F.; Nagamine, Y.; Reich, E.; Kocher,
R; Belin, D.; Vassalli, J. 1985
A; Title: Cloning, nucleocide sequencing and expression of cDNAs encoding mouse urokinase
A; Reference number: A24615; MUID: 85179474; PMID: 2985383
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                                                                            68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    u-plasminogen activator (EC 3.4.21.73) precursor - mouse c; Species: Mus musculus (house mouse) C; Date: 30-Sep-1997 #sequence_revision 30-Sep-1987 #text_change 18-Jun-1999 C; Accession: A29420; A24615 #text_change 18-Jun-1999 C; Accession: A29420; A24615 #text_change 18-Jun-1999 C; Accession: A29420; A24615 #text_change 18-Jun-1999 A; Piegen, S.J. P.; Hackel, J.L.; Reich, E.; Degen, J.L. Biochemistry 26, 8270-8279, 1987 A; Pittle: The murrine urokinase-type plasminogen activator gene. A; Reference number: A29420; MuID:88163489; PMID:2831940
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ilarity 71.7%; Pred. No. 4.1e-42;
Conservative 13; Mismatches 23
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119 LKPLVQECMVHDCADG 134
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                                                                                                                                                                                                                                                                                                                                                                                                                             u-plasminogen activator (BC 3.4.21.73) precursor - chicken
N,Alternate names: uPA
(Species: Callus gallus (chicken)
C;Species: Callus gallus (chicken)
C;Species: Callus gallus (chicken)
C;Date: 20-Jul-1990 #sequence_revision 20-Jul-1990 #text_change 16-Jul-1999
C;Date: 20-Jul-1990 #sequence_revision 20-Jul-1990 #text_change 16-Jul-1999
C;Date: 20-Jul-1990 #sequence_revision 20-Jul-1990 #text_change 16-Jul-1999
C;Date: Diol: Chem. 265, 1339-1344, 1990
A;Title: The chicken urokinase-type plasminogen activator gene.
A;Reference number: A35005; MUID:90110185; PMID:2295632
A;Reference number: A35005; MUID:90110185; PMID:2295632
A;Reference number: A35005
A;Reference number: A35005
A;Reference number: A35005
A;Reference number: A35005
A;Reference number: A35005
A;Coss.references: GB:J05187; NID:9212858; FIDN:AAA49131.1; PID:9212859
A;Cross.references: GB:J05187; NID:9212858; Ringle; serine proteinase
C;Reywords: glycoprotein; heterodimer; hydrolase; kingle; serine proteinase
F;1-21/Domain: signal sequence #status predicted <SGS-F;20-71/Domain: Kringle homology <RGS-F;79-158/Domain: Kringle homology <RGS-F;79-158/Domain: kringle homology <RRY-F;79-158/Domain: krypsin homology <RRY-F;73-428/Domain: krypsin homology <RRY-F;73-428/Domain: trypsin homology <RRY-F;73-428/Domain: trypsin homology <RRY-F;717-4296,Domain: trypsin homology <RRY-F;717-2296,202-218,210-285,310-379,342-358,369-397/Disulfide bonds: #status predicted
F;217,272,373/Active site: His, Asp, Ser #status predicted
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A;Introns: 24/3; 39/1; 85/1; 122/1; 180/2; 211/1; 268/2
C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA obtained from human endot
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                                       CDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRP 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L-plasminogen activator precursor, inactive endothelial splice form - human N.Alternate names: tissue plasminogen activator C.Species: Homo sapiens (man) C.Species: Homo sapiens (man) C.Species: 17-May-1996 #text_change 22-Jun-1999 C.Accession: 138098, Soli678 R.Siebert, P.D.; Fong, K. Nucleic Acids Res. 18, 1086, 1990 A.Pitle: Variant tissue type plasminogen activator (PLAT) cDNA obtained from A.Reference number: 138098; MUID:90192128; PMID:1969145 A.Stetus: translated from GB/EMBL/DDBJ A.Stetus: translated from GB/EMBL/DDBJ A.Stetus: 1-291 C.SIE> A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: Tanslated from GB/EMBL/DDBJ A.Stetus: 
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RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG
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197 SKFILEFCSVPVCS 210
                                                                                                                                                                     LKPLVQECMVHDCA 132
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Matches 58; Conservative
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Fil80-425/Domain: trypsin homology <TRY>
Fil81-52,46-63,65-74,82-163,103-145,134-158,168-299,211-227,219-288,313-388/Disulfide Fil82,52,46-63,526-74,82-163,103-145,134-158) (Govalent) #status predicted Fil80/Cleavage site: His-Ser (plasmin) #status predicted Fil80/Cleavage site: His-Ser (plasmin) #status predicted Fil826,275,382/Active site: His, Asp, Ser #status predicted Fil81-406/Disulfide bonds: #status predicted
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A; Residues: 1-431 «KRA
A; Residues: 1-431 «KRA
A; Cross-references: GB:M63089; NID:gl66076; PIDN:AAA31594.1; PID:gl66077
C; Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat
C; Seywords: fibrinolypals; glycoproteatin; hydrolase; kringle; serine proteinase
F; 22-36/Domain: signal sequence #status predicted «SIG»
F; 22-36/Domain: propeptide #status predicted «PRO»
F; 31-74/Domain: EGF homology «EGF»
F; 81-74/Domain: EGF homology «KRG»
F; 82-163/Domain: kringle homology «KRG»
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C; Keywords: alternative splicing; fibrinolysis; glycoprotein; kringle F;1-23/Domain: signal sequence #status predicted <51G> F;24-23/Domain: propeptide #status predicted <PRO> F;33-291/Product: t-plasminogen activator; inactive endothelial splice form #status 1;41-78/Domain: fibronectin type I repeat homology <1FA> F;86-119/Domain: EGF homology <EGF> F;127-208/Domain: kringle homology <ERP> F;215-291/Domain: kringle homology #status atypical <FR2> F;215-291/Domain: kringle homology #status atypical <FR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-291/Domain: kringle homology #status atypical <PR2> F;215-201/Disulfide bonds: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status B;215-201/Disulfide Domain: #status 
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C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
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R;Kraetzschmar, J.; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, Gene 105, 229-237, 1991
A;Ttle: The plasminogen activator family from the salivary gland of A;Reference number: JS0597; MUID:92039036; PMID:1937019
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 291;
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47.6%; Pred. No. 2.6e-22;
artive 16; Mismatches 48
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41.4%; Score 328.5; l
Best Local Similarity 46.3%; Pred. No. 1.9e
Matches 63; Conservative 13; Mismatches
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Nature Coultwee Lot, 1.0.1; Verbinan, 1.1; Fauntenoee, 1.1.

Nation Coultwee Lot, 14214-14218, 1986

A; Reference number: A37567; NUID:87033611; PMID:3021732

A; Contents: annotation; fibrin binding site

R; Verheijan, J.H.; Caspers, M.P.M.; Chang, G.T.G.; de Munk, G.A.W.; Pouwels, P.H.; Engressed J. 5, 3525-3530, 1986

A; Title: Involvement of finger domain and kringle 2 domain of tissue-type plasminogen of the Reference number: A37568; MCID:87161761; PMID:3030730

A; Contents: annotation; fibrin binding site

R; Dodd, I.; Nunn, B.; Robinson, J.H.

Tromb. Haemost. 59, 523-528, 1988

A; Title: Isolation, identification and pharmacokinetic properties of human tissue-type A; Reference number: A60902; MUID:89044681; PMID:3142086

A; Contents: annotation; novel forms of expressed recombinant t-PA

R; Patris, T.J.B.; Patrel, T.; Marston, F.A.O.; Little, S.; Emtage, J.S.; Opdenakker, G. Mol. Biol. Med. 3, 279-222, 1986

A; Title: Cloning of cDNA coding for human tissue-type plasminogen activator and its expansions. A page 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 and 1.1 an
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A;Title: Isolation and characterization of the human tissue-type plasminogen activator A;Reference number: 155232; MUID:85289338; PMID:3161893
A;Accession: 155232
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F;311-556/Domain: trypsin homology <TRY>
F;41-71,69-78,86-97,91-108,110-119,127-208,148-190,179-203,215-296,236-278,267-291,299
                                                                                                                                                                                                                                                                          forms of tissue plasminogen activato:
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                                                                        residues 36-562,
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A;Cross-references: GB:M15518; NID:g190031; PIDN:AAA60111.1; PID:g190032
A;Cross-references: GB:M15518; NID:g190031; PIDN:AAA60111.1; PID:g190032
A;Note: parts of this sequence were confirmed by peptide sequencing
R;Reddy, V.B.; Garramone, A.J.; Sasak, H.; Wei, C.
DNA 6, 461-472, 1987
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A;Cross-references: GB:M18182; NID:9340176; PIDN:AAA36800.1; PID:9340177
A, Reference number: A90488, MUID:85000468, PMID:6433976
A, Contents: annotation; melanoma cells, partial sequence of 1 R; Pohl, G; Kaplan, L.; Einarsson, M.; Wallen, P.; Jornvall, BEBS Lett. 168, 29-32, 1984
A, Title: Differences between uterine and melanoma forms of ti A, Reference number: A91322; MUID:84158956; PMID:6538514
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A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
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A; Residues: 33-45;311-320 <POH>
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A. Filtle: Cloning and expression of human tissue-type plasminogen activator CDNA in Esche A. Reference number: A9229; MUID:83115262; PMID:6337343
A. Rocession: A93293
A. Rolecule type: mRNA
A. Rocession: A93293; MUID:83115262; PMID:6337343
A. Rolecule type: mRNA
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A. Rolecule A. Rolecule Sequence of the tissue-type plasminogen activator CDNA from human ferman teason in S02125
A. Rote unstream teason of the tissue-type plasminogen activator cDNA from human ferman teason in S02125
A. Rote unstream teason of the tissue-type plasminogen activator connected sequence of the tissue-type plasminogen activator connected sequence of the tissue-type plasminogen activator connected sequence fetal lung cells A. Rolecule type: mRNA
A. Roseridues: 1-562 cARA
A. Robert and the sequence of the tissue-type plasminogen activator connected sequence of the tissue-type plasminogen activators: references: EMBL: X07393; NUD:83282579; PMID:3896833
A. Robert and the sequence of the tissue-type plasminogen activators: reference number: A3343; MUID:83169656; PMID:6572897
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F;309-559/Product: t-plasminogen activator chain B #status predicted <BCH>
F;309-553/Domain: trypsin homology <TRY>
F;38-68,66-75,83-94,88-105,107-116,124-205,145-187,176-200,213-294,234-276,265-289,297
                                                                                                                                                                                                                                                                                                                                                                                t-plasminogen activator (EC 3.4.21.68) precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 Hasquence.erevision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: A29941; S48205; S48206
R;Rickles, R.J.; Darrow, A.L.; Strickland, S.
J. Biol. Chem. 263, 1563-1569, 1988
A;Title: Molecular cloning of complementary DNA to mouse tissue plasminogen activator
A;Reference number: A29941; MUID:88087303; PMID:2826484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Annolecule type: protein
A;Residues: 33-37, X', 39-40 cLIW>
A;Residues: 33-37, X', 39-40 cLIW>
C;Superfamily: Lissue plasminogen activator; EGF homology; fibronectin type I repeat C;Superfamily: Lissue plasminogen activator; EGF homology; fibronectin type I repeat C;Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
F;1-17/Domain: signal sequence #status predicted <BGS
F;18-29/Domain: propeptide #status predicted <ARA>
F;10-308/Product: t-plasminogen activator chain A #status predicted <ACH>
F;30-15/Domain: Eibronectin type I repeat homology <IFI>
F;33-116/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
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F;23-294/Domain: kringle homology <KRI>
F;23-294/Domain: kringle homology <KRI>
F;24-205/Domain: kringle homology <KRI>
F;25-205/Domain: kringle homology <KRI>
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F;25-205/Domain: kringle homology <KRI>
F;25-205/Domain: kringle ho
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RGTWSTAENGAECINWNSSALSQKPYSARRPNAIKLGLGNHNYCRNPDRDVKPWCYVFKA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 ELHQVP----SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:J03520; NID:g202109; PIDN:AAA40470.1; PID:g202110 R;Lijnen, H.R.; van Hoef, B.; Beelen, V.; Collen, D. Biochem. 224, 863-871, 1994 A;Title: Characterization of the murine plasma fibrinolytic system. A;Reference number: S48202; MUID:95010076; PMID:7523120 A;Accession: S48205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F.149,481/Binding site: carbohydrate (Asn) (covalent) #status predicted F;308-309/Cleavage site: Arg-Ile (plasmin, trypsin) #status predicted F;355,404,510/Active site: His, Asp, Ser #status predicted
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44.5%; Pred. No. 4.9e-21;
tive 15; Mismatches 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119 LKPLVQECMVHDCADGK 135
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                                                                                             119 LKPLVQECMVHDCADG 134
                                                                                                                                                                             GKYTTEFCSTPACPKG 208
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Best Local Similarity 44.5%
Matches 61, Conservative
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A;Residues: 33-37, X',39-40 <L
A;Accession: $4820;
A;Molecule type: protein
A;Residues: 309-316 <LI2>
A;Accession: $48206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Accession: A29941
A, Molecule type: mRNA
A, Residues: 1-559 <RIC>
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A, Residues: 1-379, 'K', 381-559 «NYT>
A, Residues: 1-379, 'K', 381-559 «NYT>
A, Residues: 1-379, 'K', 381-559 «NYT>
A, Residues: 1-379, 'K', 381-559 «NYT>
A, Residues: 1-379, 'K', 381-559 (B: M2367); NID: 9530150
C, Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom C, Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
C, Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
F: 1-17/Domain: signal sequence #status predicted «NAT>
F: 1-27/Domain: signal sequence #status predicted «NAT>
F: 38-75/Domain: Libronectin type I repeat homology «IFI>
F: 38-116/Domain: EGF homology «EGF>
F: 13-205/Domain: kringle homology «KRI>
F: 213-204/Domain: kringle homology «KRI>
F: 213-204/Domain: kringle homology «KRI>
F: 213-204/Domain: kringle homology «KRI>
F: 213-204/Domain: kringle homology «RRI>
F: 213-204/Domain: kringle homology «RRI>
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F;309-559/Product: t-plasminogen activator chain B #status predicted <BCH>
F;309-553/Domain: trypsin homology <TRY>
F;38-68,66-75,83-94,88-105,107-116,124-205,145-187,176-200,213-294,234-276,265-289,297-4
F;149,481/Binding site: carbohydrate (Grovalent) #status predicted
F;308-309/Cheavage site: Arg-11e (plasmin, trypsin) #status predicted
F;355,404,510/Active site: His, Asp, Ser #status predicted
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R;Feng, P; Ohlsson, M; Ny, T.

J; Biol. Chem. 265, 2022-2027, 1990

A;Title: The structure of the TATA-less rat tissue-type plasminogen activator gene.

A;Reference number: A35029; MUID:90130448; PMID:2105315

A;Accession: A35029

A;Status: preliminary
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A;Residues: 1-559 <FRN>
A;Residues: 1-559 <FRN>
A;Residues: 1-559 <FRN>
B;NY, T.; Leonardsson, G.; Hsueh, A.J.W.
DNA 7, 671-677, 1988
                                                         F;219/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental F;310-311/Cleavage site: Arg-Ile (plasmin, trypsin) #status experimental F;357,406/Active site: His, Asp #status predicted F;513/Active site: Sex #status experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136 RGTWSTAESGAECTNWNSSALAQKPYSGRRPDAIRLGLGNHNYCRNPDRDSKPWCYVFKA 195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t-plasminogen activator (EC 3.4.21.68) precursor - rat
C,Species: Rattus norvegicus (Norway rat)
C,Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                          #status experimental
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                                                                                                                                                                                                                                                                              Length 562;
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                               carbohydrate (Asn) (covalent)
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                                                                                                                                                                                                                                                                                                                                                                       14; Mismatches
                                                                                                                                                                                                                                                                              41.4%; Score 328.5;
46.3%; Pred. No. 3.36
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196 GKYSSEFCSTPACSEG 211
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Best Local Similarity 46.3%
Matches 63; Conservative
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                                       152,483/Binding site:
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GDB:9954514
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A,Gene: GDB:HGFAC; HGFA; HGFAP
A,Cross-references: GDB:9954514
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position: 4p16-4p16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-655 < MIY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: A46688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r activator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 18
                                                                                                                                                          RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
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plasma hyaluronan-binding protein precursor - mouse

C;Species: Mus musculus (house mouse)

C;Species: Mus musculus (house mouse)

C;Date: 11.Mar-1998 #sequence_revision 11-Mar-1998 #text_change 16-Jul-1999

C;Accession: JC5878

R;Hashimoto, K.; Tobe, T.; Sumiya, J.; Saguchi, K.; Sano, Y.; Nakano, Y.; Choi-Miura, N.

Biol. Pharm. Bull. 20, 1127-1130, 1997

A;Title: Cloning of the CDNA for a mouse homologue of human PHBP: A novel hyaluronan-bin

A;Reference number: JC5878; MUID:98065239; PMID:9401717

A;Residues: 1-558 «HAS A;Molecule type: mRNA

A;Residues: 1-558 «HAS C;Comment: This protein as serine protein; EGF homology; kringle homology; trypsi

C;Superfamily: plasma hyaluronan-binding protein large chain #status predicted «MTL»

F;11-21/Domain: EGF homology «EG2»

F;113-145/Domain: EGF homology «EG2»

F;113-145/Domain: EGF homology «EG2»

F;112-185/Domain: EGF homology «EG2»

F;112-185/Domain: EGF homology «ER2»

F;112-185/Domain: EGF homology «ER2»

F;112-58/Product: plasma hyaluronan-binding protein small chain #status predicted «MATE)

F;312-558/Product: plasma hyaluronan-binding protein small chain #status predicted «MATE)
C; Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
C; Accession: JS0597
R; Kraetzschmar, J: Haendler, B.; Langer, G.; Boidol, W.; Bringmann, P.; Alagon, A.; Don Gene 105, 229-237, 1991
A; Title: The plasminogen activator family from the salivary gland of the vampire bat Des A; Reference number: JS0597; MUID:92039036; PMID:1937019
A; Molecula type: mRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; Residues: 1-477 ckRNA
A; C; Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom C; Superfamily: tissue plasminogen activator alpha-1 #status predicted cklC>
F; 1-21 Domain: signal sequence #status predicted cklC>
F; 2-36/Domain: fibronectin type I repeat homology ckRN>
F; 2-120/Domain: fibronectin type I repeat homology ckRN>
F; 2-120/Domain: fibronectin type I repeat homology ckRN>
F; 2-2-36/Domain: kringle homology ckRN>
F; 2-2-27, 70-79, 87-98 92-109, 111-120, 128-209, 149-191, 180-204, 214-345, 257-273, 265-334, 359-4
F; 153, 398/Binding site: carbohydrate (Asn) (covalent) #status predicted
F; 225-226/Cleavage site: His-Ser (plasmin) #status predicted
F; 225-226/Cleavage site: His-Ser (plasmin) covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HOVPSN-CD----CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 CINGGICVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Score 310.5; DB 2; Length
; Pred. No. 1.2e-20;
14; Mismatches 53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;272,321,428/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33.4%; Score 264.5; DB
42.5%; Pred. No. 2e-16;
:ive 18; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 39.2%;
1 Similarity 45.5%;
60; Conservative 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 PLVQECMVHDCA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FTSESCSVPVCS 210
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Best Local Similarity
Matches 51; Conserv
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hepatocyte growth factor activator (EC 3.4.21.-) precursor [validated] - human C; Species: Homo sapiens (man)
C; Species: Homo sapiens (man)
C; Date: 21-Sep-1993 #sequence_revision 25-Aug-1995 #text_change 08-Dec-2000
C; Date: 21-Sep-1993 #sequence not sequence analysis of the cDNA for a human serine proteau
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       homolog;
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F;286-367/Domain: kringle homology <KRG>
F;373-407/Product: hepatocyte growth factor activator light chain #status experimental
F;408-655/Product: hepatocyte growth factor activator heavy chain #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Biochem. 119, 1157-1165, 1996
A, Title: Purification and characterization of a novel hyaluronan-binding protein (PHBP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Experimental source: liver (mRNA); Serum (protein)
A;Note: sequence extracted from NCBI backbone (NCBIN:131227, NCBIP:131228)
A;Note: parts of the sequence, including the amino ends of the heavy and light chains,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;40,48.290,468,492,546/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;164-175,169-186,188-197,202-230,228-237,245-256,250-267,269-278,286-367,307-349,338-
F;447,497,598/Active site: His, Asp, Ser #status predicted
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N;Alternate names: hepatocyte growth factor activator-like protein; PHBP

N;Contains: serine proteinase (EC 3.4.21.-)

C;Species: Homo sapiens (man)

C;Accession: J5-Oct.1995 #sequence_revision 16-Aug-1996 #text_change 19-Jul-2002

C;Accession: JG4795

R;Choi-Miura, N.H; Tobe, T.; Sumiya, J.; Nakano, Y.; Sano, Y.; Mazda, T.; Tomita, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A, Description: activates hepatocyte growth factor by specific proteolytic cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Pathway: tissue repair and regeneration
C, Superfamily: coagulation factor XII; Ber homology; fibronectin type I repeat I
C, Superfamily: coagulation factor XII; Ber j. Net. Stringle; Javorate: glycoprotein; hydrolase; Kringle; liver; plasma; serine proteinase
F;1-34/Domain: signal sequence #status predicted <SIG>
F;108-148/Domain: fibronectin type II repeat homology <1F2>
F;202-237/Domain: fibronectin type I repeat homology <1F1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    215 YWNSHLLLQETYNMFWEDAETHGIAEHNFCRNPDGDHKPWCFVKVNSEKVKWEYCDVTVC 274
PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQE-CMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 HQVPSNCDCLNGGTCVSNKYFSNIHW------CNCPKKFGGQHCEIDKSKTCYEGNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: DDBJ:D14012; NID:g219680; PIDN:BAA03113.1; PID:g219681
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 655;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d coagulation factor XII.
A;Reference number: A46688; MUID:93252878; PMID:7683665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32.8%; Score 260.5; DB 1; larity 43.7%; Pred. No. 5.1e-16; Conservative 8; Mismatches 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;408-641/Domain: trypsin homology <TRY>
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A; Molecule type: mRNA
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Cispecies: Homo sapiens (man)
Cispecies: Thom 1915 #sequence revision 30-Jun-1991 #text change 08-Dec-2000
Ciscossion: A29411, A26814; A06930; A25191; A22248; A21037
Riccol, D.E.; McGillivray, R.T.A.
Biol. Chem. 267, 1368-13673, 1987
A;Title: Characterization of the human blood coagulation factor XII gene. Intron/exon A;Reference number: A29411; MUID:88007593; PMID:2888762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 354-362;373-615 <FUJ>
B; Harris, R.J.; Ling, V.T.; Spellman, M.W.
J. Biol. Chem. 267, 5102-5107, 1992
A; Title: O-linked fucose is present in the first epidermal growth factor domain of factor A; Reference number: A44606; MUID:92184750; PMID:1544894
A; Contents: annotation; carbohydrate binding site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Map position: 5q34-5qter
A;Introns: 19/3; 39/1; 72/2; 96/1; 133/1; 177/1; 212/1; 267/2; 340/1; 417/2; 463/1; 51
C;Complex: factor XII, prekallikrein, and HMW kininogen form a complex bound to anioni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A,Pathway: blood coagulation; fibrinolysis
C,Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homolog;
C,Keywords: blood coagulation; fibrinolysis; glycoprotein; hydrolase; kringle; plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Description: factor XIIa catalyzes the proteclytic activation of plasminogen, plasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M31315; NID:g182291; PIDN:AAA70225.1; PID:g182292
R;Ccol, D.E.; Edgell, C.J.S.; Louie, G.V.; Zoller, M.J.; Brayer, G.D.; MacGillivray, J. Biol. Chem. 260, 1366-13676, 1985
A;Title: Characterization of human blood coagulation factor XII cDNA. Prediction of tA;Reference number: A00930; MUID:86033830; PMID:3877053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Cross-references: GB:M17466; GB:J02807; NID:g180355; PIDN:AAB59490.1; PID:g180357 R;Tripodi, M.; Citarella, F.; Guida, S.; Galeffi, P.; Fantoni, A.; Cortese, R. Nucleic Acids Res. 14, 3146, 1986 A. Stribe: CDMA sequence coding for human coagulation factor XII (Hageman). A;Reference number: A26814; MUID:86176794; PMID:3754331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for human factor XII (Hageman factor) PMID:3011063
RWAS----EATYRNMTAEQALRRGLGHHTFCRNPDNDTRPWCFVWMGNRLSWEYCDLAQC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 14-332,'S',334-615 <CO2>
A; Residues: 14-332,'S',334-615 <CO2>
A; Cross-references: GB M11723; NID:g180358; PIDN:AAA51986.1; PID:g180359
R; Que, B.G.; Davie, E.W.
Biochemistry 25, 1525-1528, 1986
A; Title: Characterization of a cDNA coding for human factor XII (Hageman A; Reference number: A25191; MUID:86216049; PMID:3011063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Accession: A25191
A;Molecule type: mRNA
A;Residues: 146-378,'G',380-615 <QUE>
A;Cross-references: GB:M13147; NID:g180360; PIDN:AAA70224.1; PID:g180361
                                                                                                                                                                                        coagulation factor XIIa (EC 3.4.21.38) precursor [validated] - human N;Alternate names: Hageman factor (activated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: protein
A; Residues: 20-379 AMCM.
B; Fujikawa, K.; McMullen, B.A.
J. Biol. Chem. 258, 10924-10933, 1983
A; Title: Amino acid sequence of human beta-factor XIIa.
A; Reference number: A21037; MUID:83291041; PMID:6604055
A; Accession: A21037
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A;Cross-references: GDB:119892; OMIM:234000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A, Molecule type: DNA
A, Residues: 1-615 < COO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 4-615 <TRI>
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        239
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    유
                                                                                                A. Experimental Source: plasma
A. Mote: parts of this sequence, including the amino ends of the mature chains, were dete
C. Genetics:
C. Genetics: GDB:HABP2; HABP; HGFAL
A. Gene: GDB:HABP2; HABP; HGFAL
A. Cross-references: GDB:4573662
C. Complex: a disulfide-bonded heterodimer of chains produced from the same precursor; th
C. Superfamily: plasma Myaluronan-binding protein; GGF homology; kringle homology; krypsi
C. Superfamily: plasma hyaluronan-binding protein; byaluronic acid; hydrolase;
F. 123/Domain: signal sequence #status predicted <81G>
F. 23/Domain: signal sequence #status predicted <81G>
F. 24-131/Product: plasma hyaluronan-binding protein, 50K chain #status predicted <50K>
F. 124-131/Domain: EGF homology <EG2>
F. 124-131/Domain: EGF homology <EG3>
F. 134-276/Domain: EGF homology <ER>
F. 344-550/Domain: trypsin homology <RR>
F. 344-550/Domain: trypsin homology <RR>
F. 344-516/Product: plasma hyaluronan-binding protein, catalytic chain #status predicted
F. 324-207/Binding site: carbohydrate (Asn) (covalent) #status predicted
F. 362,405,509/Active site: His, Asp, Ser #status predicted
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NyAlternate names: Hageman factor
C;Species: Cavia porcellus (guinea pig)
C;Date: 25-Feb-1994 #sequence_revision 03-Aug-1995 #text_change 21-Jan-2000
C;Accession: 828941
E;Semba, U.; Yamamoto, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
Biochim. Biophys. Acta 1159, 113-121, 1992
A;Title: Primary structure of guinea-pig Hageman factor: sequence around the cleavage si
A;Reference number: 828941; MUID:93003367; PMID:1390917
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A;Status: preliminary
A;Ratus: preliminary
A;Ratus: preliminary
A;Rolcule type: mRNA
A;Rolcule type: mRNA
A;Rolcule type: mRNA
A;Rolcule type: mRNA
A;Coss.references: EMBL:X68615; NID:949578; PIDN:CAA48600.1; PID:949579
A;Cross.references: EMBL:X68615; NID:949578; PIDN:CAA48600.1; PID:949579
C;Superfamily: coagulation factor XII; EGF homology; fibronectin type II repeat homology <1F2>
F;148-NDomain: fibronectin type II repeat homology <FB1>
F;177-208/Domain: EGF homology <KRG>
F;186-294/Domain: kringle homology <KRG>
F;185-597/Domain: trypsin homology <TRY>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||||| |: UNGGRCLE---VEGHHLCDCPMGYTGPFCDLDTTASCYEGRGVSYRGMARTTVSGAKCQ 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQE-CMVHDC 131
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONGATCSRHKRRSKF-TCACPDQFKGKFCEIG-SDDCYVGDGYSYRGKMNRTVNOHACL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                            PIDN: AAB46909.1; PID:g1836159
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32.5%; Score 257.5; DB 1.
42.1%; Pred. No. 8.4e-16;
tive 18; Mismatches 49.
                                        A, Cross-references: GB:S83182; NID:g1836158; A, Experimental source: plasma
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Matches 49; Conserv
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A; Residues: 1-593 <8H3.

A; Residues: 1-593 <8H3.

A; Residues: 1-593 <8H3.

A; Residues: 1-593 <8H3.

A; Residues: 1-593 <8H3.

A; Residues: 1-593 <8H3.

A; Cross-references: GB:570164

A; Note: the authors translated the codon GAG for residue 23 as Val. GAG for residue 70 s Pro. CTC for residue 203 as Phe, GTG for residue 247 as Leu, CCG for residue 286 as 'is, and Art for residue 505 as Leu

R; Fulikawa, K.; Walsh, K.A.; Davie, E.W.

B; A; Title: Isolation and characterization of bovine factor XII (Hageman factor).

A; Reference number: A61329

A; Accession: A61329

A; Molecule type: 'protein'

A; Residues: 10-16, 'X', 18-19; 525-550 <FUJ>
C; Superfamily: coagulation; fibrinolysis; glycoprotein; hydrolase; monomer; plasma; F; 37-78 / Domain: EGF homology <EGF>
F; 188-120 / Domain: Ribronectin type I repeat homology <FBL>
F; 207-287 / Domain: kringle homology <ERG>
F; 207-287 / Domain: kringle homology <ERG>
F; 207-287 / Domain: kringle homology <ERG>
F; 207-287 / Domain: kringle homology <ERG>
F; 207-287 / Domain: kringle homology <ERG>
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F; 207-287 / Domain: kringle homology <ERG / Domain: kringle homology <ERG / Domain: kringle homology <ERG / 
coagulation factor XIIa (EC 3.4.21.38) precursor - bovine (fragment)
NyAlternate names: Hageman factor (activated)
Cispecies: Bos prindgenius taurus (cattle)
CjDate: 10-Apr-1995 #sequence_revision 22-Apr-1995 #text_change 21-Jan-2000
CjAccession: 845281, A61329
E;Abrinya, Y.; Semba, U.; Okabe, H.; Kambara, T.; Yamamoto, T.
Biochim. Biophys. Acta 1206, 63-70, 1994
A;Fitle: Primary structure of bovine Hageman factor (blood coagulation factor XII): con A;Reference number: 845281; MUID: 94242782; PMID: 8186251
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C; Superfamily: Drosophila neurotrophic receptor ror; kringle homology; protein kinase
C; Keywords: AFP; glycoprotein; kringle; phosphotransferase; transmembrane protein; tyr
F;237-310/Domain: kringle homology < KRG>
F;314-338/Domain: transmembrane #status predicted < TMI>
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C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 17-Nov-2000
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R,Wilson, C.; Goberdhan, D.C.I.; Steller, H.
Proc. Natl. Acad. Sci. US.A. 90, 7109-7113, 1993
A,Title: Dror, a potential neurotrophic receptor gene, e
A,Reference number: A48289; MUID:93348222; PMID:8394009
A,Accession: A48289
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A; Residues: 1-685 <WIL>
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C;Species: Desmodus rotundus (common vampire bat)

C;Species: Desmodus rotundus (common vampire bat)

C;Species: Desmodus rotundus (common vampire bat)

C;Species: Desmodus rotundus (common vampire bat)

C;Species: Desmodus rotundus (common vampire bat)

C;Accession: 35060

R;Kraetzschmar, J; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, P.; Alagon, A.; Don Gene 105, 229-237, 1991

A;Title: The plasminogen activator family from the salivary gland of the vampire bat Des A;Reference number: J50697; MUID:92039036; PMID:1937019

A;Reference number: J50600

A;Molecule type: mRNA

A;Residues: 1-394 «KRA>

A;Residues: 1-394 «KRA>

A;Residues: 1-394 «KRA>

A;Rote: the authors translated the codon ATC for residue 75 as Thr

C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom C;Superfamily: tissue plasminogen activator gamma #status predicted <PLA>

F;1-21/Domain: signal sequence #status predicted <PLA>

F;2-36/Domain: kringle homology <ARG>
F;31-384/Domain: kringle homology <ARG>
F;44-126,66-108,97-121,131-262,174-190,182-251,276-351,308-324,341-369/Disulfide bonds:
F;142-124/Cleavage site: His-Ser (plasmin) #status predicted
F;189,238,345/Active site: His-Ser (plasmin) #status predicted
F;189,238,345/Active site: His-Ser (plasmin) #status predicted
F;189,238,345/Active site: His, Sep, Ser #status predicted
F;1815/Binding site: carbohydrate (Asn) (covalent) #status predicted
              F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-372,373-615/Product: coagulation factor XIIa, alpha form #status experimental <A12>
F;20-372,373-615/Product: coagulation factor XIIa, alpha form #status experimental <A12>
F;47-88/Domain: EDF homology <EG1>
F;136-130/Domain: EDF homology <EG2>
F;137-100/Domain: EGF homology <EG2>
F;178-29/Domain: EGF homology <EG2>
F;217-295/Domain: Kringle homology <EG2>
F;217-295/Domain: Kringle homology <EG3>
F;217-295/Domain: Kringle homology <EG3>
F;237-35(Region: proline-rich F;28-356/Region: proline-rich F;33-609/Domain: homology <ETX>
F;37-609/Domain: rypsin homology <ETX>
F;37-609/Domain: arypsin homology <ETX>
F;38-110,104-119,121-130,135-163,161-170,178-189,183-198,200-209,217-295,238-277,266-296
F;98-110,104-119,121-130,135-163,161-170,178-189,183-198,ztuts experimental F;249,433/Binding site: carbohydrate (Thr) (covalent) #status predicted F;308/Binding site: carbohydrate (Ser) (covalent) #status predicted F;308/Binding site: carbohydrate (Ser) (covalent) #status predicted F;308/Binding site: carbohydrate (Ser) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40 DPHATCYKDQGVTYRGTWSTSESGAQCINWNSNLLIRRTYNGRMPEAVKLGLGNHNYCRN 99
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Pred. No. 8.1e-13;
----hes 36; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73 PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29.4%; Score 233; DB 1; Length 61
42.3%; Pred. No. 1.5e-13;
ive 12; Mismatches 40; Indels
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1 Similarity 44.3%;
39; Conservative 13
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                                                                                                                                                                                                                                                                                                                                                                                          rs of kringle repeats
C;Superfamily: apolipoprotein(a); kringle homology; trypsin homology
C;Keywords: hydrolase; kringle; lipid binding; lipoprotein; serine proteinase
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-4549/Product: apolipoprotein(a) #status experimental <MAT>
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                                                                   A;Cross-references: GB:M86877; NID:g178780; PIDN:AAB49909.1; PID:g553185 A;Note: apo(a) gene 1 (nomenclature of reference I52415)
A;Accession: I65286
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                  Cross-references: GB:M86878; NID:g178782; PIDN:AAA51749.1; PID:9553186
                                                                                                                                                                                                                                                                                                                                         A;Map position: 6q26-6q27
A;Note: several genes closely linked on chromosome 6 are identical
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  A;Status: preliminary; translated from GB/EMBL/DDBJ
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homology <KR12>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :940-1017/Domain: kringle homology <KR9>;1054-1131/Domain: kringle homology <KR1
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Fi26-33/Domain: kringle homology «KR3»
Fi370-447/Domain: kringle homology «KR4»
Fi38-61/Domain: kringle homology «KR5»
Fi288-675/Domain: kringle homology «KR5»
Fi1-789/Domain: kringle homology «KR5»
Fi36-903/Domain: kringle homology «KR8»
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -1929/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1966-2043/Domain:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2878-2955/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :2992-3069/Domain:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;3562-3639/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;3676-3753/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :4010-4087/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    157/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :2308-2385/Domain:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;3448-3525/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3782-3859/Domain:
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                                                                                                                                                                                                                                                                                           A, Gene: GDB: LPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
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A; Residues: 20-21,'P',23-34;177-179,'N',181-186,'T',188-196,'DKG',200;292-314,'W',316-31
R; A386-4401 -EBT.
R; Wade, D.B.; Clarke, J.G.; Lindahl, G.E.; Liu, A.C.; Zysow, B.R.; Meer, K.; Schwartz, K
Proc. Natl. Acad. Sci. U.S.A. 90, 1369-1373, 1993
A; Title: S, control regions of the apolipoprotein(a) gene and members of the related pla
A; Reference number: A47277; MUID:93165698; PMID:7679504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:L07899; NID:g967973; PID:g967974
R;Malgaretti, N.; Acquati, F.; Magnaghi, P.; Bruno, L.; Pontoglio, M.; Rocchi, M.; Sacco Proc. Natl. Acad. Sci. U.S.A. 89, 11584-11588, 1992
A;Title: Characterization by yeast artificial chromosome cloning of the linked apolipopu A;Reference number: A47233; MUID:93087573; PMID:1454851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule 1.4948 mRNA
A; Residues: 1-4948 cMCL>
A; Cross-references: GB:X06290; EMBL:X06696; NID:g28619; FIDN:CAA29618.1; PID:g28620
A; Cross-references: GB:X06290; EMBL:X06696; NID:g28619; FIDN:CAA29618.1; PID:g28620
B; Cacon, D.L.; Fless, G.M.; Kohr, W.J.; McLean, J.W.; Xu, Q.T.; Miller, C.G.; Lawn, R.M. Proc. Natl. Acad. Sci. U.S.A. 84, 3224-3228, 1987
A; Title: Partial amino acid sequence of apolihopyrotein(a) shows that it is homologous to A; Reference number: A28017; MUID:87204109; PMID:3472206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoprotein(a) (EC 3.4.21.-) precursor [validated] - human N;Alternate names: apolipoprotein(a); lipoprotein(a) chain apo(a) C;Species: Homo sapiens (man) C;Date: 30-Jun-1989 #sequence revision 30-Jun-1989 #text_change 08-Dec-2000 C;Accession: 800657; A28017; A47277; I60906; A47233; I52415; I65286 R;McLean, J.W.; Tomlinson, J.E.; Kuang, W.J.; Eaton, D.L.; Chen, E.Y.; Fless, G.M.; Scan Nature 330, 132-137, 1987
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R;Ichinose, A.
Biochemistry 31, 3113-3118, 1992
A;Title: M1Liple members of the plasminogen-apolipoprotein(a) gene family associated A;Reference number: 152415; MUID:92207924; PMID:1554698
A;Accession: 152415
F;408-677/Domain: protein kinase homology <KIN>
F;416-424/Region: protein kinase ATP-binding motif
F;45,63,129,144,250/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: cDNA sequence of human apolipoprotein(a) is homologous to plasminogen.
A;Reference number: S00657; MUID:88039109; PMID:3670400
                                                                                                                                                                                                                                                                                                                                            250 NVSASGKPCLRW--SWLMKEI----SDFPEL-IGQ-NYCRNPGSVENSPWCFVDSSRER 300
                                                                                                                                                                                                                                                              -----EVDKTENCYWEDGSTYRGVA 249
                                                                                                                                                                                                                                                                                                              STDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN-RRRPWCYVQVGLKP 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translation not shown; translated from GB/EMBL/DDBJ A;Residues: 1-16 <RES>
                                                                                                                                                                                                       ELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKA
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                                                                                                                                                            32;
                                                                                                         Length 685;
                                                                                                 ; Score 169; DB 1; Length 68; Pred. No. 9.6e-08; 27; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-16 <RE2>
                                                                                                                                                                                                                                                                DCQKLPQHKDCLSLGITI-----
                                                                                                      Query Match 21.3%;
Best Local Similarity 28.8%;
Matches 38; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                        LVQECMVHDCAD 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ::: | : | | | IELCDIPKCAD 312
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C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homolo C;Keywords: hydrolase; serine proteinase F;37-114/Domain: kringle homology <KR4>
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A;Map position: 6p21-6p21
C;Superfamily: neurotrophic receptor ror; immunoglobulin homology; kringle homology; p
C;Keywords: ATP; glycoprotein; kringle; phosphotransferase; transmembrane protein; tyr
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-937/Product: neurotrophic receptor rorl #status predicted <MAT>
F;72-133/Domain: immunoglobulin homology <IMM>
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SYPNAGLTM----NYCRNPDADKSPWCYT---TDPRVRWEFCNLKKCSE 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.1%; Score 159; DB 2; Length 120; 38.9%; Pred. No. 1.8e-07; ative 8; Mismatches 32; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46 KSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL--
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F;404-425/Domain: transmembrane #status predicted <TM1>
F;471-753/Domain: protein kinase homology <KIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 YCRNPDNRRRPWCYVQVGLKPLV--QECMVHDCAD 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plasmin (EC 3.4.21.7) precursor - dog (fragments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 38.99
Marches 37; Conservative
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                                                                                                                                                                                                                                                 Apolipoprotein(a) (EC 3.4.21.-) - rhesus macaque (fragment)
C; Species: Macaca mulatta (rhesus macaque)
C; Species: Macaca mulatta (rhesus macaque)
C; Species: Macaca mulatta (rhesus macaque)
C; Species: Macaca mulatta (rhesus macaque)
C; Accession: A32869; A30848
R; Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
J. Blol. (Chem. 264, 5957-5956, 1899
A; Title: Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of synthesis.
A; Reference number: A32869; MulD:89174660; PMID:2925643
A; Residues: A32869; MulD:89174660; PMID:2925643
A; Molecule type: mRNA
A; Residues: 1-1420 < TOM>
A; Cross-references: GB:J04635; NID:9342072; PIDN:AAA36833.1; PID:9342073
C; Superfamily: apolipoprotein(a); kringle homology (kR1>
F; 50-127/Domain: kringle homology (kR2>
F; 50-127/Domain: kringle homology (kR3>
F; 50-6583/Domain: kringle homology (kR3>
F; 50-6583/Domain: kringle homology (kR3>
F; 50-693/Domain: kringle homology (kR3>
F; 50-693/Domain: kringle homology (kR3>
F; 56-693/Domain: kringle homology (kR3>
F; 56-693/Domain: kringle homology (kR3>
F; 56-1145/Domain: kringle homology (kR3>
F; 1068-1145/Domain: kringle homology (kR3>
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F; 1068-1145/Domain: kringle homology (kR3>
F; 1068-1145/Domain: kringl
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Nylternate names: plasminogen
Cyspecies: Capra a aegagush hircus (domestic goat)
Cybacies: Capra a egagush hircus (domestic goat)
Cybaces: Capra a egaguene hircus (domestic goat)
Cybacesion: C61545
RySchaller, J.; Rickli, E.E.
Enzyme 40, 63-69 1988
A;Title: Structural aspects of the plasminogen of various species.
A;Reference number: A61545; MUID:89005015; PMID:3168975
A;Reference number: A61545
A;Recession: C61545
A;Retus: preliminary
A;Molecule type: protein
A;Residues: 1-123 <CGP-
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor C;Reywords: hydrolase; serine proteinase
F;41-118/Domain: kringle homology <KR4>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 KKLAGRSVEDCAAKCE-EBAQDCYHGNGQSYRGTSSTTVTGRKCQSWSSMIPHRHQKTPE 78
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1420;
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larity 40.9%; Pred. No. 9.4e-07;
Conservative 9; Mismatches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
20.2%; Score 160; DB 2;
Best Local Similarity 34.5%; Pred. No. 1.5e-07;
Matches 38; Conservative 17; Mismatches 35
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Best Local Similarity
Matches 36; Conserv
             : |
3856 LTQC 3859
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us-09-880-503-4.rpr

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it is uncertain whether Met-1 or Met-8 is the initiator
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Job time : 6.98276 secs
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A,Molecule type: protein
A,Rocession: $28200
A,Molecule type: protein
A,Rocession: $28200
A,Molecule type: protein
A,Residues: 118-460 <522>
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C;Reywords: fibrinolysis; glycoprotein; hydrolase; kringle; plasmin serine proteinase; z
F;1-37,38-117,118-460/Product: plasminogen (fragments) #status experimental <ART>
F;3-37,00main: activation peptide (fragment) #status experimental <ART>
F;3-118,00main: kringle homology <KR4>
F;118-460/Product: miniplasminogen #status experimental <MIN>
F;132-211/Domain: kringle homology <KR5>
F;226-460/Domain: kringle homology <KR5>
F;226-460/Domain: trypsin homology <KRY>
F;21-453/Domain: trypsin homology <KRY>
F;21-453/Domain: trypsin homology <KRY>
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                                                                                                                                                  296 CIRIGIPMADPINKNHKCYNSTGVDYRGTVSVTKSGRQCQPWNS-----QYPHTHTFTAL 350
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                                                                            C-----BIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL 92
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NyAlternate names: plasminogen
(c.Species: Bos primigenius taurus (cattle)
(c.Species: Bos primigenius taurus (cattle)
(c.Species: Bos primigenius taurus (cattle)
(c.Date: 30-68p-1987 #sequence revision 28-Apr-1995 #text_change 18-Jun-1999
(c.Accession: S45046; A25835; I45861; S03736
(R.Perglund, L.; Andersen, M.D.; Petersen, T.E.
Albestrict to the EMBL Data Library, May 1994
Albestription: Cloning and characterizatin of the bovine plasminogen cDNA.
A.Reference number: S45046
A.Rocession: S45046
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B61545
D161545
D161545
Nylaternate names: plasminogen
Nylotrains: miniplasminogen
Nylotrains: miniplasminogen
Cispecies: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
Cispecies: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
Cispecies: Nisorientalis aries, Ovis ammon aries (domestic sheep)
Cispecies: Nisorientalis aries, Ovis ammon aries (domestic sheep)
Cispecies: Nisorientalis aries, Ovis ammon aries (domestic sheep)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A Accession: B61545
A Molecule type: protein
A Mesidues: 1-37;88-117 <SCH3-
R;Schaller, J: Straub, C.; Kaempfer, U.; Rickli, E.E.
Protein Seq. Data Anal. 5, 21-25, 1992
A;Tile: Complete amino acid sequence of ovine miniplasminogen.
A;Reference number: S28200; MUID:93149995; PMID:1492092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27; Indels
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A,pescription: dissolves the fibrin of blood clots, acts as a proteclytic factor in a sthe walls of the graafian follicle; also activates the urokinase-type plasminogen a A,pathway: fibrinolysis and plasminogen a cykeywords: fibrinolysis; glycoprotein; hydrolase; kidney; kringle; plasm f; 1.26/pomain: signal sequence #status predicted csIG.
F; 1.26/pomain: signal sequence #status predicted csIG.
F; 1.26/pomain: plasminogen related protein precursor homology; plasminogen-related protein precursor homology cPLPH>
F; 1.27-103/bomain: activation peptide #status experimental cPRO>
F; 1.27-103/bomain: activation peptide #status experimental cART>
F; 1.04-583, 504-812/Product: plasmin data A #status experimental cACH>
F; 1.04-583, Domain: plasmin chain A #status experimental cACH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: translated from GB/EMBL/DDBJ
A;AGlecule type: mRNA
A;Residues: 706-743, 78',745-812 < MAL>
A;Cross-references: GB:K02935; NID:g163551; PIDN:AAA30714.1; PID:g163552
A;Cross-references: GB:K02935; NID:g163551; PIDN:AAA30714.1; PID:g163552
B: Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Manneberg, M Bur J. Biochem. 114, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments of human A;Reference number: S03735; MUID:81212097; PMID:7238497
                                                                                                                                                                                                                                                                   A; Molecule Lype: protein
A; Residues: 27-334,'D',336-515,'H',517-554,'L',556-812 <8CH>
A; Residues: 27-334,'D', 336-515,'H',517-554,'L',556-812 <8CH>
R; Malinowski, D.P.; Sadler, J.E.; Davie, E.W.
Biochemistry 23, 4243-4250, 1984
A; Title: Characterization of a complementary deoxyribonucleic acid coding for human and R: Reference number: 145961; MUID:85023311; PMID:6148961
Rischaller, J.; Moser, P.W.; Dannegger-Muller, G.A.K.; Rosselet, S.J.; Kampfer, U.; Riser, J. Biochem. 149, 267-278, 1985

Bur. J. Biochem. 149, 267-278, 1985

A;Title: Complete amino acid sequence of bovine plasminogen. Comparison with human pla A;Reference number: A25835; MUID:85203906; PMID:3846532

A;Accession: A25835
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Filo 269/Domain: kringle homology <RR2>
Filo 269/Domain: kringle homology <RR2>
Filo 269/Domain: kringle homology <RR3>
Filo 269/Domain: kringle homology <RR3>
Filo 264/Domain: kringle homology <RR4>
Filo 264/Domain: kringle homology <RR5>
Filo 264/Domain: kringle homology <RR5>
Filo 266/Domain: plasmin chain B #status experimental <BCH>
Filo 266/Domain: plasmin chain B #status experimental <BCH>
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Best Local Similarity 28.3%
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

December 3, 2003, 14:33:53 ; Search time 4.33777 Seconds (without alignments) 1463.563 Million cell updates/sec Run on:

US-09-880-503-4
793
1 SNELHQVPSNCDCLNGGTCV......QVGLKPLVQECMVHDCADGK 135 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 seqs, 47026705 residues Searched:

127863 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_41:\* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	SUMMARIES	Description	HUMAN P00749 homo sapien	_	P04185	IN	RAT P29598 rattus norv	UROK MOUSE P06869 mus musculu	P15638 desmod		P98121 desmodi		P19637		0	028198	004756	Q04962		P00748	P49150	P98140		AN P08519			. Q90y90 xeno	Q99n43	HUMAN Q01973 homo sapien	mus m	HUMAN Q96mu8 homo sapien	IN P06868 bos t	sns t	HUMAN P00747 homo sapien	
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## ALIGNMENTS

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MEDLINE=20266327; PubMed=10805774;
Sperl S., Jacob U., Arroyo de Prada N., Sturzebecher J., Wilhelm O.G.,
Bode W., Magdolen V., Huber R., Moroder L.;
(4-aminomethyl) phenylguanidine derivatives as nonpeptidic highly
selective inhibitors of human urokinase.";
Proc. Natl. Acad. Sci. U.S.A. 97:5113-5118(2000).
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glbbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimmood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.; Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            characterization and preliminary sequence data of the two polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oswald R.E., Bogusky M.J., Bamberger M., Smith R.A.G., Dobson C.M.; "Dynamics of the multidomain fibrinolytic protein urokinase from two-
                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 66-431 FROM N.A.
MEDIATE=443-2706; PubMed=6589620;
Verde P., Stoppelli M.P., Galeffi P., di Nocera P., Blasi F.;
"Identification and primary sequence of an unspliced human urokinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "The primary structure of high molecular mass urokinase from human urine. The complete amino acid sequence of the A chain."; Hoppe-Seyler's Z. Physiol. Chem. 363:1155-1165(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=83055099; PubMed=6754572; Steffens G.J., Gunzler W.A., Otting F., Frankus E., Flohe L.; Steffens G.J., Gunzler W.A., Otting F., Frankus E., Flohe L.; "The complete amino acid sequence of low molecular mass urokinase from human urine."; Hrom human urine."; [17]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 21-177.
MEDLINE=83055084; PubMed=6754569;
Gunzler W.A., Steffens G.J., Otting F., Kim S.-M.A., Frankus E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X.-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
MEDLINE=96000858; PubMed=8591045;
Spraggon G., Phillips C., Nowak U.K., Ponting C.P., Saunders D., Dobson C.M., Stuart D.I., Jones B.Y.;
The crystal structure of the catalytic domain of human urokinase-type plasminogen activator.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=83003608; PubMed=6749491;
Schaller J., Nick H., Rickli E.E., Gillessen D., Lergier W.,
Studer R.O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'Human low-molecular-weight urinary urokinase. Partial
                                                                                                                                                                                                                                                                                  human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 81:4727-4731(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X-RAY CRYSTALLOGRAPHY (1.8 ANGSTROMS) OF 159-411.
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Eur. J. Biochem. 125:251-257(1982).
[10]
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MEDLINE=89127526; PubMed=2536903;
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MEDLINE=93003110; PubMed=1327118;
Li X., Smith R.A.G., Dobson C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 156-176 AND 179-224.
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Turkmen B., Schmitt M., Schmilfeldt B., Trommler P., Hell W.,

Turkmen B., Schmitt M., Schmilfeldt B., Trommler P., Hell W.,

Creutzburg S., Graeff H., Magdolen V.;

"Mutational analysis of the genes encoding urokinase-type plasminogen

"Tactivator (uPA) and its inhibitor PAI-1 in advanced ovarian cancer.";

Electrophoresis 18:686-689(1997).

"I PROMOTORY PLASMINOGEN ACTIVATOR AND IS CLINICALLY USED FOR

THERAPY OF THROMBOLYTIC DISORDERS.

"I CATALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in

Plasminogen to form plasmin.

"I CATALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in

PLASMINOGEN TO FORM D.W MOLECTUAR MASS FORMS. EACH CONSISTS

OF TWO CHAINS, A AND B. THE HIGH MOLECTUAR MASS FORM CONTAINS A

LONG CHAINS, A AND B. THE HIGH MOLECTUAR MASS FORM CONTAINS A

LONG CHAINS, A AND B. THE HIGH MOLECTUAR MASS FORM CONTAINS A

LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 155 IN THE LOW

MOLECTUAR MASS FORM TO YIELD A SHORT AI CHAIN.

"IPPRARACEUTICAL: Available under the name Abbokinase (Abbott). Used

"IPPRARACEUTICAL: Available under the name Abbokinase (Abbott). Used

"IPPRARACEUTICAL: Available under the name Abbokinase (Abbott). Used

"IPPRARATY: Contains 1 kringle domain.

"IPPRARATY: Contains 1 EGF-like domain.
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                                                                                                                                                                                                                                                                                   Yoshimoto M., Ushiyama Y., Sakai M., Tamaki S., Hara H., Takahashi K., Sawasaki Y., Hanada K., "Characterization of single chain urokinase-type plasminogen activator with a novel amino-acid substitution in the kringle
"Sequential 1H NMR assignments and secondary structure of the kringle domain from urokinase.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conne B., Berczy M., Belin D.; "Detection of polymorphisms in the human urokinase-type plasminogen
                                                                                                                         Li X., Bokman A.M., Llinas M., Smith R.A.G., Dobson C.M., "Solution structure of the kringle domain from urokinase-type
                                                                                                                                                                                                                                                                                                                                                                                                 Biochim. Biophys. Acta 1293:83-89(1996).
                                                                                                                                                                                                . Mol. Biol. 235:1548-1559(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conne B., Berczy M., Belin D.;
Thromb. Haemost. 78:973-973(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                          VARIANT LEU-141.
MEDLINE=97218551; PubMed=9065988;
                                                                                                           MEDLINE=94149701; PubMed=8107091;
                                                                                                                                                                                                                                                                   MEDLINE=96186279; PubMed=8652631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hromb. Haemost. 77:434-435(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=97337920; PubMed=9194591;
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EMBL, AR37330; AAK53822.1; --
EMBL, BC013575; AAK53822.1; --
EMBL, K0226; AAC97138.1; --
EMBL; K0226; AAC97138.1; --
REMBL; K02286; AAC41252.1; --
REMBL; A21571; CAA0159.1; --
R EMBL; A18397; CAA01390.1; --
R EMBL, A18397; CAA01390.1; --
                                         Biochemistry 31:9562-9571(1992).
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                                                                                       STRUCTURE BY NMR OF 67-155
                                                                                                                                                                            plasminogen activator.
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PDB; 1KDU; 31-OCT-93.
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ACT_SITE
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TISSUB_Thoracic aorta;
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TISSUB_Thoracic aorta;
TISSUB_Thoracic aorta;
TW., Clowes A.W.;
TW., Wang T.W., Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. Clowes A.W.;
TW. CLOWER AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A. LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 155 IN THE LOW MOLECULAR MASS FORM TO YIELD A. SHORT AI CHAIN (BY SIMILARITY).
TW. SIMILARITY: Contains I EGF-like domain.
TW. SIMILARITY: Contains I EGF-like domain.
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                                                                                                                              61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                             9
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                                                                                 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                            SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                     Gaps
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01-APR-1990 (Rel. 14, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                    Papio cynocephalus (Yellow baboon).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Cercopithecidae,
Cercopithecinae, Papio.
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0
            Length 431;
                                    Indels
          ; Score 793; DB 1;
; Pred. No. 2.6e-70;
0; Mismatches 0;
                                                                                                                                                                                                                                                       433 AA.
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InterPro; IPR006209; EGF like.
InterPro; IPR006010; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR0012284; Ser protease_Try.
Pfam; PF00051; Kringle; I.
                                                                                                                                                                                                                                                     PRT;
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PRINTS; PRO0018; KRINGLE.
ProDom; PD000395; Kringle; 1.
             100.0%;
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                                                                                                                                                                 PLVQECMVHDCADGK 135
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                          Best Local Similarity 100.
Matches 135; Conservative
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            Query Match
Best Local Similarity
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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Nagamine Y., Pearson D., Altus M.S., Reich E.;
"CDNA and gene nucleotide sequence of porcine plasminogen activator.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SREL-QVPSDCGCLNGGTCMSNKYFSSIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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By ErBB-2003 (Rel. 41, Last annotation update)

Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)

(U-plasminogen activator).
                               SWART; SM00130; KK; 1.
SWART; SM00200; TYPP_SPC; 1.
PROSITE; PS00022; EGF 1: 1.
PROSITE; PS00021; ERG 1: 1.
PROSITE; PS00021; KRINGLE 1: 1.
PROSITE; PS00021; KRINGLE 2: 1.
PROSITE; PS500240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_BOM; 1.
PROSITE; PS00135; TRYPSIN_BRS; 1.
PROSITE; PS00135; TRYPSIN_BRS; 1.
PROSITE; PS00135; TRYPSIN_BRS; 1.
PROSITE; PS00135; TRYPSIN_BRS; 1.
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein; Kringle; EGF-like domain; Zymogen; Signal.
Z00 DOTENTIAL WAYD PLASMINOGEN ACTIVATOR
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Mammalia, Butheria, Cetartiodactyla, Suina, Suidae, Sus.
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UROKINASE-TYPE PLASMINOGEN ACTIVATOS
CHAIN A (BY SMILLARITY).
SHORT A CHAIN (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
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CONNECTING PEPTIDE.
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SMART; SM00181; EGF; 1.
SMART; SM00130; KR; 1.
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UROK BOVIN
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                                                                                                                                        Nagamine Y.;
Submitted (DEC-1986) to the PIR data bank.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 BGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q -> H (IN REF. 1; CAA25806).
Q -> H (IN REF. 1; CAA2611).
A -> GS (IN REF. 1; CAA25806)
EE32FCEF501321BE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED (GLCNAC. . . ) .
BY SIMILARITY.
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CHARGE RELAY SYSTEM.
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CHARGE RELAY SYSTEM.
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Nucleic Acids Res. 12:9525-9541(1984).
                                                                                                                                                                                                                                                                                                                                                                            KRINGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49116 MW;
                                                                                                                                                                                                                                                                                                                                               241
242
288
442 AA;
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152
152
33
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REVISION TO 241.
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SEQUENCE
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Gaps

3

76.7%; Score 60%; DB 1; Length 442; 78.1%; Pred. No. 3.2e-52; live 11; Mismatches 17; Indels

al Similarity 78.1 107; Conservative

Query Match Best Local

Matches

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                                                                                         81 RGKANTNTGGRPCLPWNSATVLLNTYHAHRPDALQLGLGKHNYCRNPDNQRRPWCYVQVG 140
                                                                         RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ravn P., Berglund L., Petersen T.E.; "Cloning and characterization of the bovine plasminogen activators uPA
                   21 SHELHQESGASNCGCLNGGKCVSYKYFSNIQRCSCPKKPQGEHCEIDTSQTCFEGNGHSY
SNELHQV--PSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
                                                                                                                                                                                                                                                                                                  005589; 028209;
01-FBE-1994 (Rel. 28, Created)
01-FBE-1994 (Rel. 28, Last sequence update)
01-FBE-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (Bovine).
Sukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Aortic endothelium;
MEDLINE=93216119; PubMed=8385052;
Kraetzschmar J., Haendler B., Kojima S., Rifkin D.B.,
Schleuning W.-D.;
"Bovine urckinase-type plasminogen activator and its receptor:
cloning and induction by retinoic acid.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Int. Dairy J. S:605-617(1995).
-!-CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond plasminogen to form plasmin.
-!- INDUCTION: By retinoic acid.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 BGF-like domain.
                                                                                                                                                                                                                                                                                      433 AA.
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR00209; EGF like.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; Kringle; 1.
Pfam; PF00051; Kringle; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR0018; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                     119 LKPLVQECMVHDCADGK 135
                                                                                                                                                                         141 LKQLVQECMVPNCSGGE 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL, L03546; AAA51419.1; -.
EMBL, X85801; CAA5796.1; -.
PIR, JNO560; JNO560.
HSSP; P00749; 1LMW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 12-433 FROM N.A.
                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene 125:177-183(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Kidney;
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                                                                                                Rabbani S.A.;
Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
-!-CATALYTIC ACTIVITY: Specific cleavage of Arg-[-Val bond in plasminogen to form plasmin of the MOLECULAR MASS FORMS. EACH CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONSISTS OF TWO CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 1S6 IN THE LOW MOLECULAR MASS FORM TO YIELD A SHORT AI CHAIN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DR InterPro; PRO101314; Chymotrypsin.

InterPro; IPR006210; EGF like.

DR InterPro; IPR006210; EGF like.

DR InterPro; IPR006210; EGF like.

DR InterPro; IPR001254; Scriptotease_Try.

DR PRINTS; PR001254; Scriptotease_Try.

DR PRINTS; PR001252; CHYMOTRYPSIN.

DR PRINTS; PR001395; Kringle; 1.

PROMITS; PR001305; Kringle; 1.

SMART; SM000131; EGF 1; 1.

DR PROSITE; PS01186; EGF 2; FALSE NEG.

PROSITE; PS01186; EGF 2; FALSE NEG.

PROSITE; PS01186; EGF 2; FALSE NEG.

PROSITE; PS01186; EGF 2; FALSE NEG.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0134; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

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PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS0135; TRYPSIN_DEN; 1.

PROSITE; PS
plasminogen activator gene expression in metastatic tumor cells.", Cancer Res. 52:2489-2496(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UROKINASE-TYPE PLASMINOGEN ACTIVATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN A (BY SIMILARITY).
SHORT A CHAIN (A1) (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
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EGF-LIKE.

KRINGLE.

CONDECTING PEPTIDE.

SERINE PROTEASE.

BY SIMILARITY.

BY SIMILARITY.

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CHARGE RELAY SYSTEM.

CHARGE RELAY SYSTEM.
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  RGKASTDTWGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81 RGKANRDLSGRPCLAMDSPTVLLKMYHAHRSDAIQLGLGKHNYCRNPDNQRRPWCYVQIG 140
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U.plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
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CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
                                                                                                                                                                                                                                                                      UROKINASE-TYPE PLASMINOGEN ACTIVATOR.
CHAIN A (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
               SMART; SM00130; KR; II. SSPC; I. PROSITE; SM00130; KR; II. PROSITE; PS00020; Tryp, SPC; I. PROSITE; PS00020; TRF SPC; I. PROSITE; PS00021; KRINGLE_1; I. PROSITE; PS00021; KRINGLE_1; I. PROSITE; PS500240; TRYPSIN_DOM; I. PROSITE; PS00134; TRYPSIN_DOM; I. PROSITE; PS00135; TRYPSIN_BOM; I. PROSITE; PS00135; TRYPSIN_BOM; I. PROSITE; PS00135; TRYPSIN_BOM; I. PROSITE; PS00135; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; I. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. PROSITE; PS00136; TRYPSIN_SER; II. P
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MEDLINE=92233409; PubMed=1568219;
Medderson B.R., Tansey W.P., Phillips S.M., Ramshaw I.A.,
Kefford R.F.;
"Transcriptional and posttranscriptional activation of urokinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73.0%; Score 579; DB 1; Length 433; 73.0%; Pred. No. 2.1e-49; Live 13; Mismatches 22; Indels
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SERINE PROTEASE.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48730 MW;
  PD000395; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 100; Conservative
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433 AA;
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UROK RAT
AC P29598;
DT 01-APR-199
DT 28-F8B-200
DE Urokinase-
DE Urokinase-
DE (U-plasmir
GN PLAU.
OS Rattus nor
OC Eukaryota;
OC Eukaryota;
OC Mammalia;
OC Mammalia;
OC Mammalia;
OC RATTANIETS;
RX MEDLINE=9;
RX MEDLINE=9;
RA REfford
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                                                                                                                                                                                                                                                                                                                    69 RPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMV 128
                                                                                                                                                                                                                                                                                                                                              89 RPCLAWNSPAVLQQTYNAHRSDALSLGLGKHNYCRNPDNQRRPWCYVQIGLKQFVQECMV 148
                                                                                                                                                                                                                                                                    88
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Degen S.J.F., Heckel J.L., Reich E., Degen J.L.;
Degen S.J.F., Heckel J.L., Reich E., Degen J.L.;
Degen S.J.F., Heckel J.L., Reich E., Degen J.L.;
Biochemistry 26:8270-8279 [1987].
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- CATALYTIC ACTIVITY: A NU BE THE HIGH MOLECULAR MASS FORMS. EACH CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 156 IN THE LOW MOLECULAR MASS FORM TO YIELD A SHORT AI CHAIN (BY SIMILARITY).
-!- SIMILARITY: DELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 1 BGF-like domain.
                                                                                                                                                                                                                   9 SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
                                                                                                                                                                                                                                                     29 SNCGCQNGGVCVSYKYFSSIRRCSCPKKFKGEHCEIDTSKTCYHGNGQSYRGKANTDTKG
                                                                                                                                                                        Gaps
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01-JAN-1988 (Rel. 06, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
PLAU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINEs 28179474; PubMed=2985383;

Belin D., Vassalli J.-D., Combepine C., Godeau F., Nagamine Y.,
Reich E., Kocher H.P., Duvoisin R.M.;

"Clohing, nucleotide sequencing and expression of cDNAs encoding
mouse urokinase-type plasminogen activator.";

Eur. J. Biochem. 148:225-232(1985).
                                                                                                                                                                        ó,
                                                                                                                       Length 432;
                                                                                                                                                                     21; Indels
N -> H (IN REF. 2).
E -> G (IN REF. 2).
D -> N (IN REF. 2).
4EB1B96C716244C8 CRC64;
                                                                                                                       72.0%; Score 571; DB 1; 77.2%; Pred. No. 1.3e-48;
                                                                                                                                                                        8; Mismatches
  16 N
24 E
332 D
47957 MW;
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EMBL, M17922, AA440539.1; -.
PIR; A29420, UKMS.
HASP, P00749; 1kUU.
MEROPS; S01.231; -.
                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                   129 HDCADGK 135
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  16
24
332
332
432 AA;
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P06869;
  CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG
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01-FBB-1996 (Rel. 33, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator alpha 2 precursor (EC 3.4.21.68) (DSPA alpha-2) (BAT-PA) (T-plasminogen activator).
Desmodus rotundus (Vampire bat).
                                                                                                                                                                                                                                                                                                                                                                                                          R SMART; SM0181; EGF; 1.

R SMART; SM00181; EGF; 1.

R SMART; SM00130; KR; 1.

R R SMART; SM00130; KR; 1.

R R PROSITE; PS00022; EGF 1; 1.

R PROSITE; PS0001; KRINGLE 1; 1.

R PROSITE; PS50240; TRYPSIN DOM; 1.

R PROSITE; PS50240; TRYPSIN DOM; 1.

R PROSITE; PS00134; TRYPSIN LHS; FALSE NEG.

R PROSITE; PS00135; TRYPSIN DOM; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PLASMINOGEN activation; Hydrolase; Serine protease; Glycoprotein; Maringle; EGF-1/ke domain; Zymogen; Signal.

I 20 POTENTIAL.
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MGD; MGI:97611; Plau.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006210; IEGF.
InterPro; IPR001201; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF000051; kringle; I.
Pfam; PF000051; kringle; I.
PRINTS; PR00122; CHYMOTRYPSIN.
PRINTS; PR001018; KRINGLE.
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atches 91; Conservative
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P15638;
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01-APR-1990 (Rel. 14, Last sequence update)
01-APR-1990 (Rel. 14, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
(U-plasminogen activator).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                            SALIVARY PLASMINOGEN ACTIVATOR ALPHA
                                                                                                                                                      PROSITE; PSO123; FIRENOETIN 1; 1.
PROSITE; PSO123; FIRENOETIN 1; 1.
PROSITE; PSO1021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
PROSITE; PS00135; TRYPSIN SER; 1.
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein; Kringle; EGF-like domain; Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42.3%; Score 335.5; DB 1; Length 477;
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Y -> H (IN REF. 2).
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SMART; SM00181; EGF; 1.
SMART; SM00189; FN1; 1.
SMART; SM00130; KR; 1.
SMART; SM00020; TYP, SPC; 1.
PROSITE; PS010186; EGF 1; 1.
PROSITE; PS01186; EGF 2; 1.
PROSITE; PS01253; FIBEONECTIN:
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53719 MW;
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P15120;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 667:395-403(1992).
-! FUNCTION: PROBABLY ESSENTAL TO SUPERT THE FEEDING HABITS OF THIS
EXCLUSIVELY HARMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
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DOMAIN: THE FIBENONECTIN TYPE-I DOWAIN MEDIATES BINDING TO FIBRIN, AND THE KINGLE DOMAIN APPARENTLY MEDIATES FIBRIN-INDUCED STIMULATION OF ACTIVITY.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
SIMILARITY: Contains 1 EGF-like domain.
SIMILARITY: Contains 1 fibronectin type I domain.
SIMILARITY: Contains 1 fibronectin type I domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Plasminogen activators from the saliva of Desmodus rotundus (common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plasminogen to form plasmin.
ENZYME REGULATION: ACTIVITY TOWARD PLASMINOGEN IS STIMULATED IN
THE PRESENCE OF FIBRIN I.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Chiroptera; Microchiroptera; Phyllostomidae;
Desmodontinae; Desmodus.
                                                                                                                                                               TISSUE=Salivary gland;
MEDLINE=92039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
"The plasminopan activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=salivary gland;
MEDLINE=90036867; PubMed=2509450;
Gardell S.J., Duong L.T., Diehl R.E., York J.D., Hare T.R.,
Register R.B., Jacobs J.W., Dixon R.A.F., Friedman P.A.;
"Isolation, characterization, and cDNA cloning of a vampire bat salivary plasminogen activator";
J. Biol. Chem. 264:17947-17952(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHARACTERIZATION.
MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
Donner P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATALYTIC ACTIVITY: Specific cleavage of Arg- |-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PD000395; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                  Gene 105:229-237(1991).
                                                                                                                                        SEQUENCE FROM N.A.
                                                                                    NCBI_TaxID=9430;
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Best Local Similarity
Matches 58; Conserv
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CHAIN A (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
EGF-LIKE.
                                                                                   MEDLINE=90110185; PubMed=2295632;
Leslie N.D., Kessler C.A., Bell S.M., Degen J.L.;
Leslie N.D., Kessler C.A., Bell S.M., Degen J.L.;
"The chicken ucoxinase-type plasminogen activator gene.";
J. Biol. Chem. 265:1339-1344 (1990).
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- SIMILARITY: CELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 BGF-like domain.
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SERINE PROTEASE.
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INTERCHAIN (BY SIMILARITY).
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EMBL, JOS188; AAA49130.1; -.
PIR; A35005; A35005.
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373
228
434 AA;
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MEROPS; S01.231; -.
                                                                    SEQUENCE FROM N.A.
                   NCBI_TaxID=9031;
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DB 1; Length 434;

42.2%; Score 334.5;

Query Match

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                   7
                                                            11 CDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRP 70
                                                                                        40 CQCLNGGTCITYRFFSQIKRCLCPGGYGGLHCEIDTNSICYSGNGEDYRGMAEDP----G 95
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Ann. N.Y. Acad. Sci. 667:395-403(1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE PEEDING HABITS OF THIS EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                                                                                                                                                                                                              Salivary plasminogen activator beta precursor (BC 3.4.21.68) (DSPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Salivary gland;
MEDLINE=282039036; PubMed=1937019;
Kraetzschmar J. Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
Gene 105:229-237(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                   Desmodus rotundus (Vampire bat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                            71 CLPWNSATVLQ-QTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQ 116
                                                                                                                                                                      96 CLYWDHPSVIRWGDYHADLKNALQLGLGKHNYCRNPNGRSRPWCYTK 142
54.2%; Pred. No. 1.6e-25; ive 14; Mismatches 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plasminogen to form plasmin.
--- SUBUNIT: Monomer.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
--- SIMILARITY: Contains 1 kringle domain.
--- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                               01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                             431 AA
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PIR, JS0599, JS0599.
HSSP, PSB119; LASI.
MEROPS; S01.239;
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR06209; EGF like.
InterPro; IPR06210; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 1.
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                       58; Conservative
                                                                                                                                                                                                                                                                                             STANDARD;
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TISSUE=Brain;
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      101 AQCINWNSNLLTRRTYNGRRSDAITLGLGNHNYCRNPDNNSKPWCYVIXASKFILEFCSV 160
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R PFINTS; PRO0089; trypsin; 1.

R PRINTS; PRO0122; CHYNGTRYPSIN.

R PRINTS; PRO018; KRINGIE.

R PRODOM; PD000395; Kringle; 1.

R SMART; SM00181; EGF; 1.

R SMART; SM00181; EGF; 1.

R PROSITE; PS01021; EGF 2; 1.

R PROSITE; PS01021; KRINGIE 2; 1.

R PROSITE; PS00018; KRINGIE 2; 1.

R PROSITE; PS00018; TRYPSIN DOM; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00136; MAINGIE 2; 1.

R PROSITE; PS00136; MAINGIE 2; 1.

R PROSITE; PS00136; MAINGIE 2; 1.

R PROSITE; PS00136; MAINGIE 2; 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 3: 1.

R PROSITE; PS00136; MAINGIE 4: 1.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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P00750, Q15103,
21-UUL-1986 (Rel. 01, Last sequence update)
21-UUL-1986 (Rel. 42, Last annoration update)
15-SEP-2003 (Rel. 42, Last annoration update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator) (Alteplase) (Reteplase).
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SEQUENCE FROM N.A.
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Matches 59
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Windingseiliser; Publicas; Publicas 237141;

Pennica D., Holmes W. E., Kohr W.J., Harkins R.N., Vehar G.A.,

Rand C.A., Sentet W.F., Kohr W.J., Harkins R.N., Vehar G.A.,

Mard C.A., Sentet W.F., Kohr W.J., Harkins R.N., Vehar G.A.,

Rand C. Collan D.; Collan D.;

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SECUENCE OF 31-562 FROM N.A.
MEDLINE=91291340; PubMed=1368681;
Itagaki Y., Yasuda H., Morinaga T., Mitsuda S., Higashio K.;
Itagaki Y., Maracterization of tissue plasminogen activator secreted by human embryonic lung diploid fibroblasts, IMR-90 cells.";
Agric. Biol. Chem. 55:1225-1232(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDDINE-65000468; PubMed-6433976; Pohl G., Kaellstroem M., Bergsdorf N., Wallen P., Joernvall H.; Pohl G., Kaellstroem M., Bergsdorf N., Wallen P., Joernvall H.; "Tissue plasmingen activator: peptide analyses confirm an indirectly derived amino acid sequence, identify the active site serine residue, establish glycosylation sites, and localize variant differences."; Biochemistry 23:3701-3707(1984).
                                                                                                                                                                                                                                                                                                                                                             Schleuning W.-D.;
"Isolation and characterization of the human tissue-type plasminogen
activator structural gene including its 5' flanking region.";
J. Biol. Chem. 260:11223-11230(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bode W.; "The 2.3 A crystal structure of the catalytic domain of recombinant two-chain human tissue-type plasminogen activator.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-83209620; PubMed-6682760;
Wallen P., Pohl G., Bergsdorf N., Raanby M., Ny T., Joernvall H.;
"Purification and characterization of a melanoma cell plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=91159408; PubMed=1900431;
Harris R.J., Leonard C.K., Guzzetta A.W., Spellman M.W.;
Tissue plasminogen activator has an O-linked fucose attached to
threonine-61 in the epidermal growth factor domain.";
Biochemistry 30:2311-2314(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISCLFIDE BONDS IN KRINGLE 2.
MEDLINE-91244765; PubMed-1645336;
Vlahos C.J., Wilhelm O.G., Hassell T., Jaskunas S.R., Bang N.U.;
"Disulfide pairing of the recombinant kringle-2 domain of tissue plasminogen activator produced in Escherichia coli.";
J. Biol. Chem. 266:10070-10072(1991).
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Scheib J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
                                                                                                                                             MEDIINE-83169656; PubMed-6572897;
Edlund T., Ny T., Raanby M., Heden L.-O., Palm G., Holmgren B.,
Josephson S.;
                                                                                                                                                                                                             'Isolation of cDNA sequences coding for a part of human tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF CATALYTIC DOMAIN. MEDLINE=96200985; PubMed=8613982; Lamba D., Bauer M., Huber R., Fischer S., Rudolph R., Kohnert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIINE=90092112; PubMed=2513186;
Pfeiffer G., Schmidt M., Srrube K.-H., Geyer R.;
"Carbobhydrate structure of recombinant human uterine tissue
plasminogen activator expressed in mouse epithelial cells.";
Eur. J. Blochem. 186:273-286(1989).
                                                                                                                                                                                                                                                                                    SEQUENCE OF 1-36 FROM N.A.
MEDLINE=85289338; PubMed=3161893;
Fisher R., Waller E.K., Grossi G., Thompson D., Tizard R.,
Schleuning W.-D.;
                                                                                 Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                   plasminogen activator.";
Proc. Natl. Acad. Sci. U.S.A. 80:349-352(1983)
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                                                                                                                           SEQUENCE OF 212-361 FROM N.A
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                                                                                                                                                                                                                                                                                                                                                  a recombinant kringle 2 domain
                            X.FAY CRYSTALLOGRAPHY (3.1 ANGSTROMS) OF CATALYTIC DOMAIN.
MEDLINE=97449126; PubMed=9305622;
Renatus M., Engh R.A., Stubbs M.I., Huber R., Fischer S., Kohnert U.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRUCTURE BY NMR OF KRINGLE 2.
MEDDIINE-92106229, PubMed=1762144;
Byeon I.-J.L., Llinas M.;
"Solution structure of the tissue-type plasminogen activator kringle
2 domain complexed to 6-aminohexanoic acid an antifibrinolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                         "Lysine 156 promotes the anomalous proenzyme activity of tPA: X-ray crystal structure of single-chain human tPA.";
EMBO J. 16:4797-4805(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                  STRUCTURE BY NMR OF KRINGLE 2.
MEDLINE=91200042; PubMed=1901789;
Byeon I.-J.L., Kelley R.F., Llinas M.;
"Kringle-2 domain of the tissue-type plasminogen activator. IH-NMR assignments and secondary structure.";
Eur. J. Biochem. 197:155-165(1991).
                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (2.4 ANGSTROMS) OF KRINGLE 2.
MEDLINE=92118803; PubMed=1310033;
de Vos A., Ultsch M.H., Kelley R.F., Padmanabhan K., Tulinskly A.,
Westbrook M.L., Kossiakof A.A.;
"Crystal structure of the kringle 2 domain of tissue plasminogen
activator at 2.4-A resolution.";
Biochemistry 31:270-279(1992).";
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01-NOV-1991 (Rel. 20, Last sequence update)
120, Bell. 41, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68)
(t-PA) (t-plasminogen activator).
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ilarity 46.3%; Pred. No. 8.1e-25;
Conservative 14; Mismatches 54;
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STRUCTURE BY NMR OF KRINGLE 2.
MEDLINE=90122799; PubMed=2558718;
Byeon I.-J.L., Kelley R.F., Llinas M.;
"IH NMR structural characterization of a recombifron human tissue-type plasminogen activator.";
Biochemistry 28:9350-9360(1989).
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J. Mol. Biol. 222:1035-1051(1991).
Mol. Biol. 258:117-135(1996)
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[1]
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SWART; SM00181; EGF; 1.

SWART; SM00058; FN1; 1.

SWART; SM00100; KR; 1.

SWART; SM00100; Tryp SPC; 1.

PROSITE; PS01262; EGF 1; 1.

PROSITE; PS01263; FIBRONECTIN 1; 1.

PROSITE; PS00021; KRINGLE 1; 2.

PROSITE; PS50070; KRINGLE 2; 2.

PROSITE; PS50040; TRYPSIN 1: 1.

PROSITE; PS50134; TRYPSIN HIS; 1.

PROSITE; PS00134; TRYPSIN HIS; 1.
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559 AA;
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TPA_MOUSE
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                                                                                                                        SQUENCE FROM N.A.
MEDLINE=90130448; PubMed=2105315;
MEDLINE=90130448; PubMed=2105315;
Feng P., Ohlsson M., Ny T.;
"The structure of the TATA-less rat tissue-type plasminogen activator gene. Species-specific sequence divergences in the promoter predict differences in regulation of gene expression.";
J. Biol. Chem. 265:2022-2027(1990).
-:- FUNCTION: CONVERTS THE ABUNDAY. BUT INACTIVE, ZYMOGEN PLASMINOGEN TO PLASMIN BY HYDROLYZING A SINGELE ARG-VAL BOND IN PLASMINOGEN. BY CONTROLLING PLASMIN-MEDIATED PROTEOLYSIS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND MANY OTHER PHYSIOPATHOLOGICAL EVENTS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                -:- SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.
-:- FTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE BNZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATALYZED BY PLASNIN, TISSUE KALLITREIN OR FACTOR XA.
-:- MISCELLANEOUS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENHANCES ITS CATALYTIC ACTIVITY.
-:- SIMILARITY: BELOANGS TO PEPTIDASE FAMILY SI.
-:- SIMILARITY: Contains 1 EGF-like domain.
-:- SIMILARITY: Contains 2 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin. SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
                                               Ny T., Leonardsson G., Hsueh A.J.W.; "Cloning and characterization of a cDNA for rat tissue-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006210; EGF like.
InterPro; IPR006210; IEGF.
InterPro; IPR0000011; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 1.
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EMBL, M311857, AAA42261.1; --
EMBL, M311865, AAA42261.1; JOINED.
EMBL, M311865, AAA42261.1; JOINED.
EMBL, M31189, AAA42261.1; JOINED.
EMBL, M31189, AAA42261.1; JOINED.
EMBL, M31190, AAA42261.1; JOINED.
EMBL, M31191, AAA42261.1; JOINED.
EMBL, M31192, AAA42261.1; JOINED.
EMBL, M31193, AAA42261.1; JOINED.
EMBL, M31194, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
EMBL, M31196, AAA42261.1; JOINED.
        SEQUENCE FROM N.A.
MEDLINE=89170114; PubMed=3148445;
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Pfam; PF00051; kringle; 2.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR0018; KRINGLE.
ProDom; PD000395; Kringle; 2.
                                                                                     plasminogen activator.";
DNA 7:671-677(1988).
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HSSP; P00750; IRTF.
MEROPS; S01.232; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133 RGTWSTAENGAECINWNSSALSQKPYSARRPNAIKLGLGNHNYCRNPDRDVKPWCYVFKA 192
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Plasmingen activation; Hydrolase, Serine protease; Glycoprotein;
Plasma; Kringle; EGF-like domain; Repeat; Signal.
SIGNAL 17 PROBABLE.
                                                                                                                                                                                                                   TISSUE-TYPE PLASMINOGEN ACTIVATOR.
TISSUE-TYPE PLASMINOGEN ACTIVATOR A
                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-TYPE PLASMINOGEN ACTIVATOR B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 559;
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7DBD3809C1D1C921 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EGF-LIKE.

KRINGLE 1.

KRINGLE 2.

SERINE PROTEASE.

CHARGE RELAY SYSTEM.

CHARGE RELAY SYSTEM.
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40.5%; Score 321.5; DB 1;
Best Local Similarity 45.6%; Pred. No. 3.9e-24;
Matches 62; Conservative 14; Mismatches 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FIBRONECTIN TYPE-I
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RC MEDLINE=2238627; PubMed=12477932;

RESTURE_MERMENTY gland;

RX Strausherg Rt., Feingold B.A., Grouse L.H., Derge J.G.,

Rausner R.D., Collins F.S., Wagner L., Schemen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rab Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Wordernan K.J., Malek J.A., Gunaratne P.H.,

RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Soderis G.J., in X., Gibbs R.A.,

Villalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Butkerfield Y.S.N., Krzywninski M.I., Skalska U., Smailus D.E.,

Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

Generation and initial analysis of more than 15,000 full-length human and ususe CDNA sequences.",

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

TO PLASMIN BY HUPROLYZING A SINGLE ARGYAL BOND IN PLASMINOGEN

C. T. OPLASMIN BY HUPROLYZING A SINGLE RAGYAL BOND IN CLL MIGRATION AND CONTROLLING PLASMIN-MEDIATED PROTEOLYSIS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AS INGLE BYENGE.

C. I. CATALYTIC ACTIVITY: Specific cleavage of Arg-[-val bond in plasmin. P. DONN T. BONN THE PLASMIN BY HELD BY AND DEGRADATION, IN CELL MIGRATION CONNERS OF C. PONN THE PLASMIN BY HELD BY AND DEGRADATION IN C. DONNERS OF C. PONN THE PLASMIN BY HELD BY AND DEGRADATION IN C. DONNERS OF C. DONNERS OF C. DONNERS OF C. DONNERS OF CALL U.S. A. DISULFIDE
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PHY: THE SINGLE CHAIN, ALMOST FULLY ACTIVE BNZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATALYZED BY PLASMIN, TISSUE KALLIKREIN OR FACTOR XA. MISCELLAMBROSS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN BNIRANCES ITS CATALYTIC ACTIVITY. SIMILARITY: CORLAİNS I GGF-TİKE GÖMMİN.

SIMILARITY: CONLAİNS I GFF-TİKE GÖMMİN.

SIMILARITY: CONLAİNS I İİDTONECLİN LYPE I GÖMMİN.

SIMILARITY: CONLAİNS Z KİNGJE GÖMMİN.
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=88087303; PubMed=2826484;
Rickles R.J., Darrow A.L., Strickland S.;
"Molecular cloning of complementary DNA to mouse tissue plasminogen activator mRNA and its expression during F9 teratocarcinoma cell differentiation.";
                                                                                                                                 Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
                                                                                                                                                                                                                                                                                                                                                                                                                              Biol. Chem. 263:1563-1569(1988).
                                                                            (t-PA) (t-plasminogen activator)
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                                                                                                                                                                                                           NCBI_TaxID=10090;
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3 ELHQVP----SNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
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                                                                                                                                                                                                                                                                                                                                                                                              Plasminogen activation; Hydrolase, Serine protease, Glycoprotein;
Plasma; Kringle, EGF-like domain; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-TYPE PLASMINOGEN ACTIVATOR B CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-TYPE PLASMINOGEN ACTIVATOR.
TISSUE-TYPE PLASMINOGEN ACTIVATOR A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
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tive 15; Mismatches 56; Indels
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MEROPS; S01.232; -. MGD; MGI:97610; Plat. InterPro; IPR001314; Chymotrypsin. InterPro; IPR001314; Chymotrypsin. InterPro; IPR006209; EGF like. InterPro; IPR000083; Fibrnch1. InterPro; IPR00001; Kringle. InterPro; IPR001254; Ser_protease_Try. Pfam; PF00008; EGF; 1. Pfam; PF000039; finl; 1. Pfam; PF00039; finl; 1. Pfam; PF00039; finl; 1. Pfam; PF00039; trypsin; 1. PRNNYS; PR00721; Kringle; 2. Pr00m; PD000395; Kringle; 2. SWART; SM0018; KRINGLE. ProDom; PD000395; Kringle; 2. SWART; SM0018; KR; 2. SWART; SM00130; KR; 2. SWART; SM00130; KR; 2. SWART; SM00130; KR; 2.
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KRINGLE 1.
KRINGLE 2.
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PROSITE; PS50070; KRINGLE 2: 2.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
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559 AA;
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EMBL; BC011256; AAH11256.1; -. PIR; A29941; A29941. HSSP; P00750; 1A5H. EMBL; J03520; AAA40470.1; -.

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    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
74 QCHSVPVRSCSEPRCFNGGTCQQALYFSDF-VCQCPDGFVGKRCDIDTRATCFEEQGITY 132
                                              RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                     TISSUE=Salivary gland;

MEDLINE=98022741; PubMed=9354616;

Renatus M., Stubbs M.T., Huber R., Bringmann P., Donner P.,

Schleuning W.D., Bode W.;

"Catalytic domain structure of vampire bat plasminogen activator: a
molecular paradigm for proteolysis without activation cleavage.";

Biochemistry 36:13489-13493(1997)

-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FEEDING HABITS OF THIS

EXCLUSIVELY HARMYTOPHAGOUS ANIMAL. POTENT THROMBOLYTIC AGENT.

-:- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in
plasminogen to form plasmin.

-:- RNZYME REGULATION: ACTIVITY TOWARD PLASMINOGEN IS STIMULATED IN
THE PRESENCE OF FIBRIN I.
                                                                                                                                                                                                                                                                                                                                01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
828-FEB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator alpha 1 precursor (EC 3.4.21.68) (DSPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity."; And. Sci. 667:395-403(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBUNIT: MODOMER.

DOMAIN: THE FIBRONECTIN TYPE-I DOMAIN MEDIATES BINDING TO FIBRIN,
AND THE KRINGLE DOMAIN APPARENTLY MEDIATES FIBRIN-INDUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                           Desmodus rotundus (Vampire bat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Ammanlai, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
Desmodontinae, Desmodus.
NCBI_TaxID=9430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Salivary gland;
MEDLINE=292039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
The plasminogen activator family from the salivary gland of the "The plasminogen activator family from the salivary gland of the Gene 105:229-237(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T., Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STIMULATION OF ACTIVITY.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
--- SIMILARITY: Contains 1 BGF-like domain.
--- SIMILARITY: Contains 1 fibronectin type I domain.
--- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                         477 AA.
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MEDLINE=93393059; PubMed=1309059;
                                                                                                                                    119 LKPLVQECMVHDCADGK 135
                                                                                                                                                                              193 GKYTTEFCSTPACPKGK 209
                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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MC P99119:50

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MC PEB-1

MC P99119:50

MC PEB-2

MC PEB-2

MC PEB-3

MC PEB-3

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SALIVARY PLASMINOGEN ACTIVATOR ALPHA 1.
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PROSITE; PS01022; EGF_1; 1.

PROSITE; PS01186; EGF_2; 1.

PROSITE; PS01223; FIBROMECTIN 1; 1.

PROSITE; PS00021; KRINGLE 1; 1.

PROSITE; PS50040; TRYPSIN DOM; 1.

PROSITE; PS00134; TRYPSIN HIS; 1.

PROSITE; PS00135; TRYPSIN HIS; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00136; SMANDIN SER; 1.

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N-LINKED GLCNAC.
/FTId=CAR 000028.
                                                                                                                                                                          MEROPS, 501.23; -..
GlycoSuiteDB; P98119; -..
GlycoSuiteDB; P98119; -..
InterPro; IPR001214; Chymotrypsin.
InterPro; IPR006209; BGF like.
InterPro; IPR006210; IBGF.
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
InterPro; IPR00001; Kringle.
Pfam; PF000039; fnl; 1.
Pfam; PF000039; trypsin; 1.
Pfam; PF000039; trypsin; 1.
Pfam; PF000189; KRINGLE.
PR0DOM; PD000189; KRINGLE.
PRODOM; PD000189; KRINGLE.
SWART; SW001181; EGF; 1.
send an email to license@isb-sib.ch)
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EMBL; M63986; AAA31592.1;
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SMART; SM00130; KR; 1.
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PDB; 1A51; 23-MAR-99.
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  BY
                                                                                       -:- SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.
-:- FTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-314 CATALYZED BY PLASMIN, TISSUB KALLIKREIN OR FACTOR XA.
-:- MISCELLANEOUS: BINDS TO THE KINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENHANCES ITS CATALYTIC ACTIVITY.
-:- SIMILARITY: COLLAINS I BGF-11ke domain.
-:- SIMILARITY: Contains I fibronectin type I domain.
-:- SIMILARITY: Contains 2 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TO PLASMIN BY HYDROLYZING A SINGLE ARG-VAL BOND IN PLASMINOGEN. ECONTROLLING PLASMIN-MEDITAD PROTECLYSIS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND MANY OTHER PHYSIOPATHOLOGICAL EVENTS.

ANALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in plasminogen to form plasmin.

SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IISSUE-TYPE PLASMINOGEN ACTIVATOR B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGF-LIKE.
KRINGLE 1.
KRINGLE 2.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                     MEROPS; S01.23; ...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000039; BGF_like.
InterPro; IPR0000210; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001054; Ser_protease_Try.
Pfam; PF00008; BGF; 1.
Pfam; PF000039; Intil; 1.
Pfam; PF000039; Kringle; 2.
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                                                                                                                                                                                                                                                                                                                 EMBL; X85800; CAA59795.1; -. HSSP; P00750; 1RTF.
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ACT SITE
ACT SITE
ACT SITE
DISULFID
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  80 HTVPVNSCSEPRCFNGGTCWQAVYFSDF-VCQCPAGYTGKRCEVDTRATCYEGQGVTYRG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ravn P., Berglund L., Petersen T.E.; "Cloning and characterization of the bovine plasminogen activators uPA and tPA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Int. Dairy J. 5:605-617(1995).
-:- FUNCTION: CONVERTS THE ABUNDANT, BUT INACTIVE, ZYMOGEN PLASMINOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                 5 HOVPSN-CD---CLNGGTCVSNKYPSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bos taurus (Bovine).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                  39.2%; Score 310.5; DB 1; Length 477; 45.5%; Pred. No. 4e-23; Live 14; Mismatches 53; Indels 5
                                                                                                                                                                                                                                                                                                                                                             53616 MW; AA06FD1739C10E5E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        566 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 PLVQECMVHDCA 132
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                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                          477 AA;
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TISSUE=Kidney;
                                                                                                               90;
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Q28198;
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STRAND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLEAVED IN ACTIVE FORM. HEPATOCYTE GROWTH FACTOR ACTIVATOR SHORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HEPATOCYTE GROWTH FACTOR ACTIVATOR LONG CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN EBR; 1.
Hydrolase; Glycoprotein; Flasma; Serine protease; Kringle; Signal; EGF-like domain; Repeat; Zymogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY).
SIMILARITY).
SIMILARITY).
         -:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-:- SIMILARITY: Contains 2 EGF-like domains.
-:- SIMILARITY: Contains 1 fibronectin type I domain.
-:- SIMILARITY: Contains 1 fibronectin type II domain.
-:- SIMILARITY: Contains 1 kringle domain.
-:- CAUTION: IT IS UNCERTAIN WHETHER MET-1 IS THE INITIATOR.
                                                                                                                                                                                                                                                                                                                                             EMBL; D14012; BAA01113.1; -.

EMBL; Z69923; CAA93803.1; -.

EMBL; Z69923; CAA93803.1; -.

EMBL; Z69923; CAA93803.1; -.

EMBL; D146688; A46688.

HSPP; P00763.1DPO.

R Genew; HGNG: 4894; HGFAC.

MIN; 6045.2; -.

GO; GO:0005576; C:extracellular; TAS.

GO; GO:0005576; C:extracellular; TAS.

GO; GO:0005576; C:extracellular; TAS.

R GO; GO:0005576; C:extracellular; TAS.

InterPro; IPR001314; Chymortypsin.

InterPro; IPR001314; Chymortypsin.

InterPro; IPR001029; EGF 1ix.

InterPro; IPR001029; FN Type_II.

R Pfam; PF00009; EGF; 2.

R Ffam; PF00009; EGF; 2.

R Ffam; PF00009; EGF; 2.

R Ffam; PF00009; EGF; 2.

R Ffam; PF00009; EGF; 2.

R Ffam; PF00009; FN Type_II; 1.

R RINTS; PR0013; FN Type_II; 1.

R RINTS; PR0013; FN Type_II; 1.

R RNART; SM00139; FN 1: 1.

R SMART; SM00139; FN 1: 1.

R SMART; SM00139; FN 1: 1.

R RNART; SM00139; FN 1: 1.

R RNART; SM00139; RX INGIE 1: 1.

R RNART; SM00139; RX INGIE 1: 1.

R RNART; SM00139; RX INGIE 2: 1.

R RNOSITE; PS01186; EGF 1: 2.

R RNOSITE; PS01186; EGF 1: 2.

R RNOSITE; PS01184; TRYPEIN 1: 1.

R RNOSITE; PS01034; TRYPEIN 1: 1.

R RNOSITE; PS01134; TRYPEIN 1: 1.

R RNOSITE; PS01134; TRYPEIN 1: 1.

R RNOSITE; PS01134; TRYPEIN 1: 1.

R RNOSITE; PS01134; TRYPEIN 1: 1.

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FIBRONECTIN TYPE-I.
EGF-LIKE 2.
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SERINE PROTEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EGF-LIKE
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              RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
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99 BY SIMILARITY.
109 BY SIMILARITY.
120 BY SIMILARITY.
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Molecular cloning and sequence analysis of the cDNA for a human serine protease reponsible for activation of hepatocyte growth factor. Structural similarity of the protease precursor to blood coagulation factor XII.";
J. Biol. Chem. 268:10024-10028(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGFA_HUMAN STANDARD; PRT; 655 AA.

204755, 204756,

01-JUN-1994 (Rel. 29, Last sequence update)

01-JUN-1994 (Rel. 29, Last sequence update)

28-FRBE-2003 (Rel. 41, Last annotation update)

Hepatocyte growth factor activator precursor (EC 3.4.21.-) (HGF activator)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.
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Zhao S., Odell C.;

Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY
CONVERTING IT FROM A SINGLE CHAIN TO A HETEROIMERIC FORM.
-!- SUBUNIT: DIMER OF A SHORT CHAIN AND A LONG CHAIN LINKED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Miyazawa K., Shimomura T., Kitamura A., Kondo J., Morimoto Y., Kitamura N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN PRECURSOR AND IS THEN ACTIVATED TO A HETERODIMERIC FORM. TISSUE SPECIFICITY: LIVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 300.5; DB 1; Length 566; Pred. No. 4.5e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16; Mismatches 54; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
TISSUE=Liver, and Serum;
MEDLINE=93252878; PubMed=7683665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119 LKPLVQECMVHDCA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197 GKYISEFCSTPACA 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                            480
513
153
487
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SMART; SM00181; BGF;
SMART; SM00058; FN1;
SMART; SM00059; FN2;
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HSSP; P00763; 1DPO.
MEROPS; $01.211; -.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Hystricognathi, Caviidae, Cavia.
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001-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last squence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
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SMART; SMOOD30; Tryp_SPC; 1.

R SMART; SMOOD20; Tryp_SPC; 1.

DR PROSITE; PSO1186; EGF_2; 1.

DR PROSITE; PSO1023; FIBRONECTIN 1; 1.

DR PROSITE; PSO1021; KRINGLE 1; 1.

DR PROSITE; PSO0701; KRINGLE 1; 1.

DR PROSITE; PSO0700; KRINGLE 2; 1.

DR PROSITE; PSO0134; TRYPSIN DOM; 1.

DR PROSITE; PSO0135; TRYPSIN DOM; 1.

DR PROSITE; PSO0135; TRYPSIN JES; 1.

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-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 fibronectin type I domain.
-!- SIMILARITY: Contains 1 fibronectin type II domain.
-!- SIMILARITY: Contains 2 EGF-like domains.
-!- SIMILARITY: Contains 1 kringle domain.
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ALPHA-FACTOR XIIA LIGHT
FIBRONECTIN TYPE-II.
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FIBRONECTIN TYPE-1.
EGF-LIKE 2.
KRINGLE.
PRO-RICH.
SERINE PROTEASE.
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000742; EGF 2.
InterPro; IPR000509; EGF 7.
InterPro; IPR000509; EGF 11ke.
InterPro; IPR000505; FN Type.II.
InterPro; IPR000505; FN Type.II.
InterPro; IPR0005016; EN Type.II.
InterPro; IPR00016; FN Type.II.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 2.
Pfam; PF00008; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00009; fn1; 1.
Pfam; PF00099; rxypsin; 1.
PRINTS; PR00013; RNINGLE.
PRODOM; PD000995; RXINGLE.
PRODOM; PD000995; RXINGLE.
PRODOM; PD000995; RXINGLE.
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SIGNAL 129 BY SIMILARITY.
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FIBRONECTIN TYPE-I.
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MGD, MGI:1859281; Hgfac.

InterPro; IPRO00742; EGF 2.

InterPro; IPRO00742; EGF 2.

InterPro; IPRO00742; EGF 2.

InterPro; IPRO00603; Fibrnchil.

InterPro; IPRO00603; Fibrnchil.

InterPro; IPRO00603; Fibrnchil.

InterPro; IPRO00603; Fibrnchil.

InterPro; IPRO00601; Kringle.

InterPro; IPRO00001; Kringle.

Pfam; PF000003; EGF; 2.

Pfam; PF000003; EGF; 2.

Pfam; PF000003; EGF; 2.

Pfam; PF00001; Kringle; 1.

Pfam; PF00001; Kringle; 1.

PRINTS; PR00013; FNTYPEII.

PRODOM; PD000395; Kringle; 1.

SWART; SW00103; FNTYPEII.

PRODOM; PD000395; Kringle; 1.

SWART; SW00130; KRINGLE.

PROSTIE; PS00123; EGF; 2.

PROSTIE; PS00123; EGF; 2.

PROSTIE; PS00123; FIBRONECTIN 1; 1.

PROSTIE; PS00123; FIBRONECTIN 2; 1.

PROSTIE; PS00123; FIBRONECTIN 2; 1.

PROSTIE; PS00023; FIBRONECTIN 2; 1.

PROSTIE; PS00023; FIBRONECTIN 2; 1.

PROSTIE; PS00023; TRYPSIN 18; 1.

PROSTIE; PS00134; TRYPSIN 18; 1.
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                                                                 EMBL; AF099017; AAF02489.1; -.
EMBL; AF224724; AAF34712.1; -.
HSSP; P00763; 1DPO.
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Van Adelsberg J.S., Sengal S., Kukes A., Brady C., Barasch J.,

Yang J., Huan Y.,

"Activation of HGF by endogenous HGF activator is required for
metanephric kidney morphogenesis in vitro.",

Submitted (JAN-2000) to the EMBL/GEBBAR/DBBJ databases.

-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY CONVERTING

IT FROM A SINGLE CHAIN TO A HETERODIMERIC FORM (BY SIMILARITY).

-!- SUBUNIT: DIMER OF A SHORT CHAIN AND A LONG CHAIN LINKED BY A
DISULEIDE BOND (BY SIMILARITY).

-!- SUBCELLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN
PRECURSOR AND IS THEN ACTIVATED TO A HETERODIMERIC FORM (BY
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N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                          Q9R099; Q9JKV4;
16-OCT-2001 (Rel. 40, Created)
16-OCF-2001 (Rel. 40, Last sequence update)
28-FED-2003 (Rel. 41, Last annotation update)
Hepatocyte growth factor activator precursor (EC 3.4.21.-) (HGF activator) (HGFA).
                                                                                                                                                                                                                                                  .,
8
                                                                                                                                                                                                                     32.4%; Score 257; DB 1; Length 603; 40.8%; Pred. No. 8.4e-18;
                                                                                                                                                                                                                                               46; Indels
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Itoh H., Rataoka H., Roono H.;
"Mouse hepatroyte growth factor activator.";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                               48DC6B946FB9ED59 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: Contains 2 EGF-like domains.
-!- SIMILARITY: Contains 1 fibronectin type I domain.
-!- SIMILARITY: Contains 1 fibronectin type II domain.
-!- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                                                                                                                                                 653 AA
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Best Local Similarity
Matches 49; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                         290 EYRGVASTAASGLSCLAWNSDLLYQELHVDSVAAAVLLGLGPHAYCRNPDKDERPWCYV 348
                                                                                                                                                                                                                                                                                                                                      5 HOVPSNCDCLNGGTCVSNKYFSNIHW -----CNCPKKFGGQHCEIDKSKTCYEGNGH
                                                                                                                                                                                                                                                                                                 Gaps
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Nucleic Acids Res. 14:3146-3146(1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Characterization of human blood coagulation factor XII cDNA.
Prediction of the primary structure of factor XII and the tertiary
structure of beta-factor XIIa.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. MEDIINE=88007593; PubMed=2888762; Cool D.E., McGillivray R.T.A.; Cool D.E., McGillivray R.T.A.; "Characterization of the human blood coagulation factor XII gene. Intron/exon gene organization and analysis of the S'-flanking
                                                                                               (POTENTIAL)
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P00748; P78339;
21-JUL-1986 (Rel. 01, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
28-FBE-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
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MEDLINE-86033830; PubMed=3877053;
Cool D.E., Edgell C.-J.S., Louie G.V., Zoller M.J., Brayer G.D.
                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SECURINCE FROM N.A., AND VARIANTS ALA-207; ASP-545 AND HIS-605. Rieder M.J., Armel T.Z., Carrington D.P., Ozuna M., Kuldanek SRajkumar N., Toth E.J., Yi Q., Nickerson D.A.; Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                          ; Score 250.5; DB 1; Length 653;
; Pred. No. 3.9e-17;
11; Mismatches 41; Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=86176794; PubMed=3754331;
Tripodi M., Citarella F., Guida S., Galeffi P., Fantoni A.,
                                                                                                                                                                                                G -> W (IN REF. 2).
88B4B20255DF7FDC CRC64;
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MEDLINE=86216049; PubMed=3011063;
Que B.G., Davie E.W.;
                                                                                                                                                                                                                    70567 MW;
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CONFLICT
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-!- DISEASE DEFECTS IN FLZ DO NOT CAUSE ANY CLINICAL SYMPTOMS. THE SOLE BFFECT IS THAT WHOLE-BLOOD CLOTTING TIME IS PROLOGED.
-!- MISCELLANEOUS: FACTOR XII, PREKALLIKREIN, AND HWW KININOGED.
-!- MISCELLANEOUS: FACTOR XII, PREKALLIKREIN, AND HWW KININOGED FORM A COMPLEX BOUND TO AN ANONIC SURFACE. PREKALLIKREIN IS CLEAVED BY FACTOR XII TO FORM KALLIKREIN, WHICH THEN CLEAVES FACTOR XII FIRST TO ALPHA-FACTOR XIIA AND THEN TO BETA-PACTOR XIIA. ALPHA-FACTOR XIIA ACTIVARES FACTOR XI.
-!- SIMILARITY: COLLAINS 2 EGF-Like domains.
-!- SIMILARITY: CONTAINS 1 fibronectin type I domain.
-!- SIMILARITY: CONTAINS 1 fibronectin type II domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=56131302; PubMed=8528215; Schloesser M., Hofferbert S., Bartz U., Lutze G., Lammle B., Engel W.; Schloesser M., Hofferbert S., Bartz U., Lutze G., Lammle B., Engel W.; "The novel acceptor splice site mutation 11396 (G-->A) in the factor XII gene causes a truncated transcript in cross-reacting material negative patients ";"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Coagulation factor XII Locarno: the functional defect is caused by the amino acid substitution Arg-353-->Pro leading to loss of a Rallikrein cleavage site."; Blood 84:1173-1181(1994).
                                                                                                                                                            MEDLINE-85182674; PubMed-3886654;
McMullen B.A., Fujikawa K.;
"Amino acid sequence of the heavy chain of human alpha-factor XIIa
(activated Hageman factor).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Coagulation factor XII (Hageman factor) Washington D.C.: inactive factor XIIa results from Cys-571-->Ser substitution."; Proc. Natl. Acad. Sci. U.S.A. 86:8319-8322(1989).
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Hovinga J.K., Schaller J., Stricker H., Wuillemin W.A., Furlan M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYDRATE-LINKAGE SITE THR-109.

MEDLINE=92184750; PubMed=1544894;

Harris R.J., Ling V.T., Spellman M.W.;

"O-linked fucose is present in the first epidermal growth factor domain of factor XII but not protein C.";

J. Biol. Chem. 267:5102-5107(1992).
Characterization of a cDNA coding for human factor XII (Hageman
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                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=83291041; PubMed=6604055;
Fujikawa K., McMullen B.A.;
"Amino acid sequence of human beta-factor XIIa.";
J. Biol. Chem. 258:10924-10933(1983).
                                                                                                                                                                                                                                                                                                           Biol. Chem. 260:5328-5341(1985).
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                                                                 Biochemistry 25:1525-1528(1986)
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                                                                                                                                   SEQUENCE OF 20-379.
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Query Match
Best Local Similarity
Matches 44; Conserv
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          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the BMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its was by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                               ALPHA-FACTOR XIIA HEAVY CHAIN.
ALPHA-FACTOR XIIA LIGHT CHAIN.
BETA-FACTOR XIIA PART 1.
BETA-FACTOR XIIA PART 2.
FIBRONECTIN TYPE-II.
                                                                                                                                                                                                                                                                                                                                                                                                                             EGF-LIKE 1.
FIBRONECTIN TYPE-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRO-RICH.
SERINE PROTEASE.
O-LINKED (FUC).
SIMILARITY: Contains 1 kringle domain.
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                                                            EMBL, M31315; AAA70225.1; ---
EMBL, AF538691, AAM97932.1; --
EMBL, M1723; AAA51986.1; ---
EMBL, M1466; AAB59490.1; ---
EMBL, M17464; AAB59490.1; JOINED.
EMBL, M13147; AAA70224.1; ---
EMBL, U71274; AAB51203.1; ---
FIR, A29411, KFHUI.2.
HSSP, P00763; 1DPO.
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                                                                                                                                                                                                                                                                                                                      183 CLHGGRCLE---VEGHRLCHCPVGYTGPFCDVDTKASCYDGRGLSYRGLÁRÍTLSGAPCQ 239
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Ann. N.Y. Acad. Sci. 667:395-403(1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FEEDING HABITS OF THI EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                                                          8; Gaps
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01-FFB-1996 (Rel. 33, Last sequence update)
8-FEB-2003 (Rel. 41, Last amoration update)
Salivary plasminogen activator gamma precursor (EC 3.4.21.68) (DSPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Salivary gland,
MEDLINE-92039036, PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P.,
Algon A., Donner P., Schleuning W.D.;
"The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
Gene 105:229-237(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
Desmodontinae, Desmodus.
                                                                     O-LINKED (POTENTIAL).
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CHARGE RELAY SYSTEM (BY SIMILARITY)
CHARGE RELAY SYSTEM (BY SIMILARITY)
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MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boldol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
                                                                                                                                                                                                Length 615;
                                                                                                                                                                                                                                                                                                                                                              73 PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                                                     240 PWAS----EATYRNVTAEQARNWGLGGHAFCRNPDNDIRPWCFV 279
                                                                                                                                                                                                                                        40; Indels
              (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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12; Mismatches 40
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(GLCNAC
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Desmodus rotundus (Vampire bat).
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                         H HSSP; P98119; 1A51.

R HSROPS; S01.239; --
R InterPro; IPR001011; Kringle.
R InterPro; IPR0010101; Kringle.
R InterPro; IPR001019; Kringle.
R Pfam; PF00018; Kringle; 1.
R PRINTS; PR001018; KRINGLE.
R PRINTS; PR001019; KRINGLE.
R PRINTS; PR000109; KRINGLE.
R PROSTITE; S000020; KRINGLE.
R PROSTITE; PS00070; TRPSIN DOR PROSTITE; PS00070; TRPSIN DOR PROSTITE; PS00070; TRPSIN DOR PROSTITE; PS00070; TRPSIN DOR PROSTITE; PS00070; KRINGLE 2; 1.
R PROSTITE; PS00070; KRINGLE 2; 1.
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R PROSTITE; PS00134; TRYPSIN DOR; 1.
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Shibuya Y., Semba U., Okabe H., Kambara T., Yamamoto T.;
"Primary structure of bovine Hageman factor (blood coagulation factor
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
Bovidae, Bovinae, Bos.
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01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
coagulation factor XII precursor (BC 3.4.21.38) (Hageman factor)
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THE INITIATION: FACTOR XII IS ASEUM GLYCOPROTEIN THAT PARTICIPATES IN GRAEBATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE GRNERATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE GRNERATION OF BLOOD COAGULATION, FIBRINOLYSIS, AND THE CATALYTIC ACTIVITY: Cleaves selectively Arg-|-11e bonds in factor VII to form factor VIIa and factor XI to form factor XIa.

VII to form factor VIIa and factor XI to form factor XIa.

MISCELLANBOUS: FACTOR XII, PREKALLIKREIN, AND HWW KININOGEN FORM A COMPLEX BOUND TO AN ANIONIC SURFACE. PREKALLIKREIN IS CLEAVED BY FACTOR XII TO FORM KALLIKREIN, WHICH THEN CLEAVES FACTOR XII FIRST TO ALPHA-FACTOR XIIA AND THEN THEN CLEAVES FACTOR XII S CLEAVED BY CHALLIKREIN CLEAVES FACTOR XIIA AND THEN TO BETA-FACTOR XIII S CLEAVED ONLY TO ALPHA-FACTOR XIIA AS IT LACKS THE TRYPSIN/

KALLIKREIN CLEAVAGE SITE.

SIMILARITY: CONTAINS 1 fibronectin type I domain.

SIMILARITY: Contains 1 fibronectin type II domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                         Fujikawa K., Walsh A.K., Davie W.E.;
"Isolation and characterization of bovine factor XII (Hageman
XII): comparison with human and guinea pig molecules.";
Biochim. Biophys. Acta 1206:63-70(1994).
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001319; EdF like.
InterPro; IPR001319; EdF like.
InterPro; IPR001210; IEGF.
InterPro; IPR001210; IEGF.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00108; EGF; 2.
Pfam; PF00131; Int; 1.
Pfam; PF00131; Kringle; 1.
Pfam; PF00131; Kringle; 1.
Pfam; PF00131; Kringle; 1.
Pfam; PF00131; Kringle; 1.
PRINTS; PR00131; NNTYPEII.
                                                                                                         SEQUENCE OF 10-21; 350-364 AND 525-550.
MEDLINE=77182112; PubMed=861210;
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PS00022; EGF_1; 2.
PS01186; EGF_2; FALSE_NEG.
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PS00023; FIBRONECTIN 2; 1.
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Biochemistry 16:2270-2278(1977)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; S70164; AAB30804.2;
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SWART; SW00058; FN1; 1.
SWART; SW00059; FN2; 1.
SWART; SW00130; KR; 1.
SWART; SW00020; Tryp_SPC;
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HSSP; P00763; 1DPO.
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MEROPS; S01.211;
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MEDLINE=93348222; PubMed=8394009;
        64 IDIMGRPCLPWNSAIVLOQIY-HAHRSDALQLGKHNYCRNPDNRRRPWCYVQVGLKPL 122
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Eukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota,
Neoptera, Endopterygota, Diptera, Brachycera, Muscomorpha,
Ephydroidea, Drosophilidae, Drosophila.
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                                       ALPHA-FACTOR XIIA HEAVY CHAIN.
ALPHA-FACTOR XIIA LIGHT CHAIN.
FIBRONECTIN TYPE-II.
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OC SPHAGOIGA;
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Through a potential maioric cypic receptor gene, encodes a Drosophila humolog of the vertebrace Ror family of Trk-related receptor tyrosine Rinases.

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63 STDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN-RRRPWCYVQVGLKP 121
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             EMBL, L20297; AAA28860.1; -..

EMBL, A2002908; CAA05743.1; -..

EMBL, A4002908; CAA05743.1; -..

PIR; A48289; A46289

HSSP; P11362; IPGK.

F1UBASE; FEGONO10407; Ror.

GO; GO:0004711; P:control nervous system development, IBP.

GO; GO:0006468; P:protein tyrosine kinase activity; NAS.

GO; GO:0006417; P:control nervous system development, IBP.

R InterPro; IPR000024; Fz domain.

R InterPro; IPR00001; Kringle.

R InterPro; IPR00001; Kringle.

R InterPro; IPR00011; RTKinaseII.

R InterPro; IPR01245; Tyr pkinase.

R Pfam; PF00051; Kringle; I.
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Pred. No. 3.8e-09;
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an email to license@isb-sib.ch)
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PRO109; TYRKINASE.
PRODOM; PD000395; Kringle; 1.
ProDom; PD00001; Prot_kinase; 1.
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28.8%;
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-!- PTM: N- and O-glycosylated. The N-glycans are complex biantennary structures present in either a mono- or disialylated state. The O-glycans are mostly (80%) represented by the monosialylated core type I structure, NeuNAcalpha2-3Galbeta1-3GalNAc, with smaller amounts of disialylated and non-sialylated O-glycans also
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Lp(a) may be a ligand for megalin/Gp 330.
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MIRDLINES-86217891, PubMed-8642595,
Mikol V., Lograsso P.V., Boetccher B.R.;
"Crystal structures of apolipoprotein(a) kringle IV37 free and
"Crystal structures of apolipoprotein(a) kringle IV37 free and
complexed with 6-aminohexanoic acid and with p-aminomethylbenzoic
acid: existence of novel and expected binding modes.";
J. Mol. Biol. 256:751-761(1996).
                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE=88039109; PubMed=3670400;
MCLean J.W., Tomlison J.E., Kuang W.-J., Eaton D.L., Chen E.Y.,
Fless G.M., Scanu A.M., Lawn R.W.;
"CDNA sequence of human apolipoprotein(a) is homologous to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=90076123; PubMed=2531657; Salonen B.-M., Jauhlainen M., Zardi L., Vaheri A., Ehnholm C.; Salonen B.-M., Jauhlainen M., Zardi L., Vaheri A., Ehnholm C.; Lipoprotesin() binds to fibronectin and has serine proteinase activity capable of cleaving it.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=21303595; PubMed=11294842; Barvey D.J., Rudd P.M., Th. Garner A.H., Royle L., Harvey D.J., Rudd P.M., Th. Carner A.H., Royle L., Harvey D.J., Rudd P.M., Th. Carner a projection of the N- and O-glycans of human apolipoprotein(a): role of o-glycans in conferring protease
                                                                                                                                                       01-AUG-1988 (Rel. 08, Created)
1-AUG-1988 (Rel. 08, Last sequence update)
15-SRP-2003 (Rel. 42, Last annotation update)
Apolipoprotein(a) precursor (EC 3.4.21.-) (Apo(a)) (Lp(a)).
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"The mysteries of lipoprotein(a).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=90049223; PubMed=2530631;
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DISFASE: Elevated plasma concentrations of apo(a) and its naturally occurring proteolytic fragments are correlated with atherosclerosis. Homology with plasminogen kringles IV and V is thought to underlie the atherogenicity of the protein, because the fragments are competing with plasminogen for fibrin(ogen) binding. MISCELLANEOUS: Apo(a) is known to be proteolytically cleaved, leading to the formation of the so called mini-fp(a). Apo(a) fragments accumulate in atherosclerotic lesions, where they may promote thrombogenesis. O-glycosylation may limit the extent of SIMILARITY: Contains 38 kringle domains.
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PRINTS; PRO0722; CHYMOTRYPSIN.
PRINTS; PRO0722; CHYMOTRYPSIN.
PRODm; PD000395; Kringle; 38.

BYART; SM00130; KR; 38.

SWART; SM00020; Tryp SPC; 1.

PROSITE; PS500240; TRYPSIN L138.

PROSITE; PS50240; TRYPSIN L1S; 1.

PROSITE; PS00134; TRYPSIN L1S; 1.

PROSITE; PS00135; TRYPSIN L1S; 1.

Hydrolase; Serine profease; Lipid transport; Plasma; Glycoprotein; Kringle; Repeat; Atherosclerosis; Signal; Polymorphism; 3D-structure.

SIGNAL
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GO, GO:0004666; F:endopeptidase inhibitor activity; TAS.

GO, GO:0008015; P:circulation; TAS.

GO; GO:0009405; P:pathogenesis; TAS.

InterPro; IPR001314; Chymotrypsin.

InterPro; IPR001254; Ser protease_Iry.

Pfam; PF00081; kringle; 38.

Pfam; PF00089; trypsin; 1.
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PIR; S00657; S00657.
PDB; I171; 13-JUN-01.
PDB; IKIV; 18-JUN-02.
PDB; IKIV; 18-MAY-99.
PDB; AKIV; 18-MAY-99.
PDB; AKIV; 18-MAY-99.
MEROPS; S01.226; -.
Genew; HGNN:6667; LPA.
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28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the eye and the nose) (Dickkopf receptor).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70 PCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLV--QECM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nakamira T., Nakamira T.;
Submitted (JUL-2001) to the BMBL/GenBank/DDBJ databases.

-! FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf

-! FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf

-!- SUBCELLULAR LOCATION: Type I membrane protein (Potential).

-! SUBLIARITY: Contains 1 CUB domain.

-! SIMILARITY: Contains 1 WSC domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ^ Match 20.5%; Score 162.5; DB 1; Length 4548; Local Similarity 33.1%; Pred. No. 1e-07; les 41; Conservative 12; Mismatches 46; Indels 25;
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  and for commercial
                    (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47 SKTCYEGNGHFYRGKASTDTM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRN 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29 SPECFTANGADYRGTQSWTALQGGKPCLFWNE--TFQHPYNTLKYPNGEGGLGEHNYCRN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDAMPG=2925643; MEDAINE=89174660; PubMed=2925643; Tomlinson J.E., McLean J.W., Lawn R.M.; "Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of "Rhesus monkey apolipoprotein(a).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. Chem. 264:5957-5965(1989).
- FUNCTION: Apo(a) is the main constituent of lipoprotein(a) (Lp(a)). It has serine proteinase activity and is able of autoproteolysis. Inhibits tissue-type plasminogen activator 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Macaca mulatta (Rhesus macaque).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Cercopithecidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GLCNAC. .) (POTENTIAL)
(GLCNAC. .) (POTENTIAL)
(GLCNAC. .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 161; DB 1; Length 473;
Pred. No. 1.6e-08;
7; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1990 (Rel. 13, Created)
1-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Apolipoprotein(a) (EC 3.4.21.-) (Apo(a)) (Lp(a)) (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
KREMEN PROTEIN 1.
EXTRACELLULAR (POTENTIAL).
  Usage by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51869 MW; 9B510857DF856F08 CRC64;
                                                                                                                                                                                                                                                                                                                                                                  Wnt signaling pathway; Signal; Transmembrane; Kringle.
SIGNAL 1 19 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL. CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GLCNAC. . (GLCNAC. . (GLCNAC. .
                                                                     EMBL; AB065090; BAB62003.1; -.
GO; GO:0016021; C:integral to membrane; ISS.
InterPro; IPR000859; CUB_domain.
InterPro; IPR000859; CUB_domain.
InterPro; IPR000801; Kringle.
InterPro; IPR002889; WSC.
Pfam; PF00431; CUB; 1.
Pfam; PF00431; CUB; 1.
Pfam; PF00051; kringle; 1.
Pfam; PF000051; kringle; 1.
PROMPT; SM00049; KRINGLE.
PROSTTE; PS00180; CUB; 1.
PROSTTE; PS01180; CUB; 1.
PROSTTE; PS01180; CUB; 1.
PROSTTE; PS01180; CUB; 1.
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modified and this statement is not removed.
                    entities requires a license agreement (Sons send an email to license@isb-sib.ch).
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32; Conservative
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NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87 PDGDVSPWCYV 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  473 AA;
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  ID DATA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DEL PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA PACA DE LA
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Lp(a) may be a ligand for megalin/Gp 330.

-!- SUBUNIT: Disulfide-linked to apo-B100. Binds to fibronectin and decorin (By similarity).

-!- PTM: N- and O-glycosylated (By similarity).

-!- DISEASE: Elevated plasma concentrations of apo(a) and its naturally occurring proteolytic fragments are correlated with atherosclerosis. Homology with plasminogen kringles IV and V is thought to underlie the atherogenicity of the protein, because the tragments are competing with plasminogen for fibrin(ogen) binding.

-!- MISCELLANEOUS: Apo(a) is known to be proteolytically cleaved, leading to the formation of the so called mini-Lp(a). Apo(a) fragments accumulate in atherosclerotic lesions, where they may promote thromogenesis. O-glycosylation may limit the extent of proteolytic fragmentation (By similarity).

-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Gaps
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Pred. No. 4.6e-08;
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241 KRINGLE 2.
245 KRINGLE 2.
469 KRINGLE 3.
583 KRINGLE 5.
697 KRINGLE 6.
893 KRINGLE 7.
917 KRINGLE 8.
1145 KRINGLE 9.
1149 KRINGLE 10.
1158367 MW; BE102949E03C5B0E CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP, P00747; 2PK4.
MEROPS, S01.226; -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; J04635; AAA36833.1; -.
PIR; A32869; A32869.
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Best Local Similarity 40.9%;
Matches 36; Conservative
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22 CSDSFHSECYTVWGADYRGTQNQTSLDGGKPCLFWNE--TFQHPYNTLKYPNGEGGLGEH 79

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RESULT
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                             15-SEP-2003 (Rel. 42, Created)
15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last amnotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the eye
                                                                                                                                                                                                                       Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf to block Wnr/Deta-catenin signaling (By similarity).
-!- SUBCELLULAR LOCATION: Type I membrane protein (Potential).
-!- SUBLIARLIY: Contains I CUB domain.
-!- SIMILARLIY: Contains I Kringle domain.
-!- SIMILARLIY: Contains I WSC domain.
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GGCNAC. .) (POTENTIAL).
GGCNAC. .) (POTENTIAL).
GGLCNAC. .) (POTENTIAL).
GGLCNAC. .) (POTENTIAL).
GGLCNAC. .) (POTENTIAL).
GGLCNAC. .) (POTENTIAL).
                                                                                                             Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 159; DB 1; Length 452
Pred. No. 2.4e-08;
9; Mismatches 32; Indels
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EXTRACELLULAR (POTENTIAL).
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KRINGLE.
WSC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS01180; CUB; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
Wht signaling pathway; Glycoprotein; Kringle;
  452 AA
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InterPro; IPR000859; CUB domain.
InterPro; IPR000001, Kringle.
InterPro; IPR002899; WSC.
Pfam; PF00431; CUB; 1.
Pfam; PF01821; CUB; 1.
Pfam; PF01822; WSC, 1.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; KRINGLE.
                                                                                    and the nose) (Dickkopf receptor)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50188 MW;
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  STANDARD;
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SMART; SM00130; KR; 1.
SMART; SM00321; WSC; 1.
                                                                                                                                                        Xenopus.
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                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                    NCBI_TaxID=8355;
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23
3370
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215
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KRM1 XENLA
Q90Y90;
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TRANSMEM
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CARBOHYD
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Best Local
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                                                                                                 KREMEN1.
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aramanizar cloning and characterization of Kremen, a novel
Kringle-containing transmembrane protein.";
Biochim. Biochim. Biophys. Acta 1518.63-72(2011).

C. I block Wnt/Deta-catenin signaling (By similarity).

C. SUBCELDIAR LOCATION: Type I membrane protein (Potential).

C. I SUBCELDIAR STAGE: In the embrane protein is first detected and ay 9 and increases up to day 18. Lower levels are found in adult. At 9.5 dpc, expression is lirst detected on day 9 and increases up to day 18. Lower levels are found in adult. At 9.5 dpc, expression is localised to the apical ectodermal ridge (AER) of the developing fore- and hindlimb buds, the telencephalon and the first brachial arch. At 10.5 dpc, expression is also observed in the myotome and in sensory tissues such as the nasal pit and optic vesicle.

C. SIMILARITY: Contains I Kringle domain.

C. SIMILARITY: Contains I Kringle domain.
                                                                                                                                                                        28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the eye and the nose) (Dickkopf receptor).
KREMENI OR KREMEN.
                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A., DEVELOPMENTAL STAGE, AND TISSUE SPECIFICITY TISSUE=Brain, and Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-21167372; PubMed-11267660;
Nakamura T., Aoki S., Kitajima K., Takahashi T., Matsumoto K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00042; CUB; 1.
SMART; SM01130; KR; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
Wht signaling pathway; Signal; Transmembrane; Kringle.
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GO; GO:0016021; C:integral to membrane; NAS.
InterPro; IPR000859; CUB domain.
InterPro; IPR000001; Kringle.
InterPro; IPR002889; WSC.
                                                                                                                                       PRT;
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HSSP; P00747; 1CEA.
100 NYCRNPDNRRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam, PF00431, CUB, 1.
Pfam, PF00051, kringle, 1.
Pfam, PF01822, WSC, 1.
                                   80 NYCRNPDGDVSPWCYI
                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                 NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nakamura T.;
                                                                                                                                     KRM1 MOUSE
                                                                                                                     KRM1_MOUSE
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Conservative

31;

Matches

Similarity

4; Gaps

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DOMAIN
TRANSMEM
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MOD_RES
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CYEGNGHFYRGKASTDTM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=Short; Synonyms=T-ROR1; Synonyms=T-ROR1; Synonyms=T-ROR1; Squence=V8P 005008; SecureTCTY: Sequence=V8P 005008; TISSUE SPECIFICITY: EXPRESSED STRONGLY IN HUMAN HEART, LUNG, AND KIDNEY, BUT WEAKLY IN THE CNS. THE SHORT ISOFORM IS STRONGLY EXPRESSED IN FETAL AND ADULT CNS AND IN A VARIETY OF HUMAN CANCERS, INCLUDING THOSE ORIGINATING FROM CNS OR PNS NEUROBERN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=97030043; PubMed=8875995;
Reddy U.R., Phatak S., Pleasure D.;
"Human neural tissues express a truncated Rorl receptor tyrosine
kinase, lacking both extracellular and transmembrane domains.";
Oncogene 13:1555-1559(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ASQUENCE FROM N.A. (ISOFORM LONG).
MEDLINE=91100347; PubMed=1334494;
Masiakowski P., Carroll R.D.;
"A novel family of cell surface receptors with tyrosine kinase-like domain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RORI HUMAN STANDARD; PRT; 937 AA.
16-0CT-2001 (Rel. 40, Last sequence update)
16-0CT-2003 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annoration update)
15-SEP-2003 (Rel. 42, Last annoration update)
15-SEP-2003 (Rel. 42, Last annoration update)
16-SEP-2003 (Rel. 42, Last annoration update)
17-SEP-2003 (Rel. 42, Last annoration update)
18-SEP-2004 (Rel. 42, Last annoration update)
18-SEP-2005 (Rel. 42, Last annoration update)
18-SEP-2005 (Rel. 42, Last annoration update)
18-SEP-2005 (Rel. 42, Last annoration update)
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18-SEP-2005 (Rel. 42, Last annoration update)
18-SEP-2005 (Rel. 42, Last annoration 
                                                                                                                    (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                           Score 159; DB 1; Length 473; Pred. No. 2.5e-08;
                                                                                                                                                                                                                                                                        26; Indels
                                                                                                                                                                                                             586827788BE3FDD1 CRC64;
            KREMEN PROTEIN 1.
EXTRACELLULAR (POTENTIAL)
                                                         CYTOPLASMIC (POTENTIAL)
KRINGLE.
                                                                                                                     (GLCNAC. . .)
(GLCNAC. . .)
(GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tyrosine phosphate.
SUBCELIULAR LOCATION: Type I membrane protein.
SUBCELTERMATIVE PRODUCTS:
Bvent-Alternative splicing; Named isoforms=2;
                                                                                                                                                                (GLCNAC.
                                                                                                                                                                                                (GLCNAC
                                                                                                                                                                                                                                                      Pred. No. 2.5e
7; Mismatches
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                                            POTENTIAL.
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N-LINKED
N-LINKED
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N-LINKED
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                                                                                                                                                                                                               51716 MW;
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4413
2210
2210
2210
2211
2211
333
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21
393
414
31
1120
214
29
217
293
293
343
473 AA,
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               CHAIN
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CARBOHYD
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SEQUENCE
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                        AROUND
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ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
BY SIMILARITY).
PHOSPHORYLATION (AUTO-) (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005737; C:cytoplasm; TAS.
GO; GO:0005887; C:integral to plasma membrane; TAS.
GO; GO:0004714; F:transmembrane receptor protein tyrosine kin. .;
GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYROSINE-PROTEIN KINASE TRANSMEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEVELOPMENTAL STAGE: EXPRESSED AT HIGH LEVELS DURING EARLY EMBRYONIC DEVELOPMENT. THE EXPRESSION LEVELS DROP STRONGLY ARC DAY 16 AND THERE ARE ONLY VERY LOW LEVELS IN ADULT TISSUES. SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. ROR
                                                                                                      -!- SIMILARITY: Contains 1 frizzled (FZ) domain.
-!- SIMILARITY: Contains 1 immunoglobulin-like C2-type domain.
-!- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL)
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IG-LIKE C2-TYPE.
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                                                                                                                                                                                                                                                                                                                                                          EMBL; M97675; AAA60275.1; -.
EMBL; U38894; AAC50714.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A45082; A45082.
HSSP; P00747; 1CEA.
Genew; HGNC:10256; ROR1.
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us-09-880-503-4.rsp

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DOMAIN
TRANSMEM
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MOD RES
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CARBOHYD
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CARBOHYD
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KRM1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
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    셤
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                                                                                                                                                                                                                                                                                                             236 DETSSVPKPRDLCRDECELLENVLCQTEYIFARSNPMILMRLKLPNCEDLPQPESPEAAN 295
                                                                                                                                                                                                                                                                                                                                                                                                 296 CIRIGIPMADPINKOHKCYNSTGVDYRGTVSVTKSGROCOPWNS-----OYPHTHTFTAL 350
                                                                                                                                                                                                                                                                      2 NELHQVP-----BNCDCLNGGTCVSNKYFS-----NIHWCNC-----PKKFGGQH 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE=99248426; PubMed=10231392;
Olshi I., Takeuchi S., Hashinoto R., Nagabukuro A., Ueda T., Liu Z.J.,
Hatta T., Akira S., Matsuda Y., Yamamura H., Otani H., Minami Y.;
Spatio-temporally regulated expression of receptor tyrosine kinases,
mRorl, mRorl, and mouse development: implications in development
and function of the nervous system.";
Genes Cells 4:41-56(1999).
-:- FUNCTION: TYROSINE-PROTEIN KINASE RECEPTOR WHOSE ROLE IS NOT YET
                                                                                                                                                                                                                                                                                                                                                       42 C-----EIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL
                                                                                                                                                                                                                          37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tyrosine phosphate.
-!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. ROR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
17yrosine-protein kinase transmembrane receptor ROR1 precursor (EC 2.7.1.112) (Neurotrophic tyrosine kinase, receptor-related 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
(GLCNAC. . .) (POTENTIAL)
(GLCNAC. . .) (POTENTIAL)
(GLCNAC. . .) (POTENTIAL)
(GLCNAC. . .) (POTENTIAL)
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-1- SIMILARITY: Contains 1 immunoglobulin-like C2-type domain.
-1- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                                              20.0%; Score 158.5; DB 1; Length 937; 29.7%; Pred. No. 5.4e-08; tive 14; Mismatches 51; Indels 37;
N-LINKED (GLCNAC. .) (POTEN
N-LINKED (GLCNAC. .) (POTEN
N-LINKED (GLCNAC. .) (POTEN
N-LINKED (GLCNAC. .) (POTEN
Missing (in laoform Short).
/FIId=VSP 005008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      937 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                               93 QLG--LGKHNYCRNPDNRRR-PWCY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351 RFPELNGGHSYCRNPGNOKEAPWCF 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGD; MGI:1347520; Rorl.
InterPro; IPR000024; Fz domain.
InterPro; IPR007110; Ig-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-OCT-2001 (Rel. 40, Created)
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                                                                                                                                      104312
                                                                                                                                                                                                                            43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
    47
66
184
315
549
                                                                                                                                 937 AA;
                                                                                                                                                                           Query Match
Best Local Similarity
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15-SEP-2003
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Q9Z139;
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    CARBOHYD
                                            CARBOHYD
CARBOHYD
                                                                                                                                      SEQUENCE
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296 CIRIGIPMADPÍNKNHKCÝNSTGVDÝRGTVSVTKSGRQCQPWNS-----QYPHTHSFTAL 350
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY.
PHOSPHORYLATION (AUTO-) (BY SIMILARITY).
BY SIMILARITY.
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 NELHQVP-----SNCDCLNGGTCVSNKYFS-----NIHWCNC-----PKKFGGQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYROSINE-PROTEIN KINASE TRANSMEMBRANE RECEPTOR RORI.
                                                                                                                                                                                                                                      REINTS; PROUGES; EXTINGLE.

REINTS; PROUGES; TEXTINGLE.

REINTS; PROUGES; TEXTINGLE.

REINTS; PROUGES; TEXTINGLE.

REINTS; PROUGES; TEXTINGLE; 1.

REART; SMO0408; IGC2; T.

REART; SMO0109; FKR; 1.

REART; SMO0119; FKR; 1.

REOSITE; PSS0018; FZ; 1.

REOSITE; PSS0011; FZ; 1.

REOSITE; PSS0011; FRINGLE 2; 1.

REOSITE; PSS0011; RENTINGLE 2; 1.

REOSITE; PSS0011; PROTEIN KINASE ATP; FALSE_NEG.

REOSITE; PSS0010; RENTINGLE 2; 1.

REOSITE; PSS0010; RENTINGLE 2; 1.

REOSITE; PSS0010; RENTINGLE 2; 1.

RENTINGLE 2; PSS0010; PROTEIN KINASE TYR; 1.

RETARREFERSE; TYTOSING-PROTEIN KINASE TYR; 1.

RETARREFERSE; TYTOSING-PROTEIN KINASE TYR; 1.

RETARREFERSE; TYTOSING-PROTEIN KINASE TYR; 1.

RETARREFERSE; TYTOSING-PROTEIN KINASE TYR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Transmembrane; Signal; Glycoprotein; Kringle; Phosphorylation;
Immunoglobulin domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20.0%; Score 158.5; DB 1; Length 937; 29.7%; Pred. No. 5.4e-08; ive 14; Mismatches 51; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  104156 MW; D728733E67D1782C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RECEPTOR RORI.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE.
FZ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (BY SIMILARITY). (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROTEIN KINASE.
SER/THR-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _XRM1 HUMAN STANDARD; PRT; 475 AA Q96MŪ8; Q9BY70; Q9UGS5; Q9UGU1; 28-FEB-2003 (Rel. 41, Created) 28-FEB-2003 (Rel. 41, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SER/THR-RICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93 QLG--LGKHNYCRNPDNRRR-PWCY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  351 RFPELNGGHSYCRNPGNQKEAPWCF 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRO-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRINGLE
InterPro; IPR001598; Ig_c2.
InterPro; IPR001006; Ig_MHC.
InterPro; IPR000001; KrIngle.
InterPro; IPR00119; Prot kinase.
InterPro; IPR001245; Tyr_Dkinase.
Pfam; PR01392; Pr. 1.
Pfam; PR00047; Ig; 1.
Pfam; PR00051; kringle; 1.
Pfam; PR00051; kringle; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 29.7%
Matches 43; Conservative
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ALTERNATIVE PRODUCTS:

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RAM REDLINE 20057165; PubMed=10591208;

RAM REDLINE 20057165; PubMed=10591208;

RADIARM I. Hunt A.R., Collins J.E., Bruskiewich R., Beare D.M.,

RADIARM I. Hunt A.R., Adiascough R., Almeida J.P., Babbage A.K.,

RAGING M., Smink L.J., Adiascough R., Bates K.M., Beasley O.P.,

Bard G.P., Balley J.E., Enidgeman A.M., Buck D., Burgess J.,

RADIATON I. Cobley V.B., Collins B.E., Connor R.,

Conroy D., Cozby N.R., Coble C.G., Collier R.B., Connor R.,

RADIATON N.R., Cobley V.B., Cox A.V., Davis J. Dawson B.,

RADIATON N.R., Cobley W.B., Cox A.V., Davis J., Dawson B.,

RADIATON N.R., Cowley W.B., Cox A.V., Davis J., Dawson B.,

RADIATON N.R., Collins R.B., Cox A.V., Cariffiths M.N., Hall C.,

RADIATON N.R., Collins R.B., Cox A.V., Garner A.M., Ellington A.G.,

RADIATON N., Radiaton M.E., Graffman D.V., Griffiths M.N., Hall C.,

RADIATON N., Marklesph-Rohemmadi M., Mathews L.H., Mocran O.T.,

RADIATON, Marklesph-Rohemmadi M., Mathews L.H., Mocran O.T.,

RADIATON, Paritt R., Pearson J., Smilling B.,

RADIATON, RADIATON N., Ramasy H., Ramasy Y., Rogers L., Ross M.T.,

RADIATON, Wall N., Ramasy H., Ramasy Y., Rogers L., Ross M.T.,

RADIATON, Wall N., Ramasy H., Rankey Y., Rogers L., Wilmid L.,

RADIATON, Walliams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Williams S.A., Chen F., Chui. Carbiree J., Decknim S., Loh H., Mariaton J., Williams S., Loh P., Walley S., Bardarf M.L.,

RADIATON S., Johnson D., Bemis G., Bentley D., Bradehmy S., Do A., D.

RADIATON S., Williams C., Williams C., Williams S., Williams S., Williams S., Williams S., Williams S., Wi
                    Kremen protein 1 precursor (Kringle-containing protein marking the eye and the nose) (Dickkopf receptor).
                                                                                                                                                                                                                                                                                                                              Tashiro H., Yamazaki M., Watenabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Sugiyama T., Irie R., Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y., Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Kanda K., Wagatsuma M., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawakami B., Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K.,
                                                                                           Bukeryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                     Nakamura T., Nakamura T.;
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isogai T.;
"NEDO human CDNA sequencing project.";
Submitted (CCT-2001) to the EMBL/GenBank/DDBJ databases.
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "The DNA sequence of human chromosome 22."; Nature 402:489-495(1999).
                                                                                                                                                                                                                SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. (ISOFORM 2).
                                             and the nose) (Dic
KREMEN1 OR KREMEN.
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FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf to block Wnt/beta-catenin signaling (By similarity). SUBCELLULAR LOCATION: Type I membrane protein (Potential).

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50 CYEGNGHFYRGKASTDIM--GRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VSD -- AIQDSEVTSLIWSQGQPRSI (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLCNAC. . .) (POTENTIAL).
GLCNAC. . .) (POTENTIAL).
GLCNAC. . .) (POTENTIAL).
GLCNAC. . .) (POTENTIAL).
GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wnt signaling pathway; Signal; Transmembrane; Kringle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KREMEN PROTEIN 1.
EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I -> V (IN REF. 2).
B7E86FD80F96A0A4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
CYTOPLASMIC (POTENTIAL).
KRINGLE.
                                                                                                    Note=No experimental confirmation available;
-!- SIMILAMITY: Contains I CUB domain.
-!- SIMILAMITY: Contains I Kringle domain.
-!- SIMILAMITY: Contains I WSC domain.
Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 156; DB 1;
Pred, No. 4.9e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; 295116; CABG2952.1; -
EMBL; AL021393; CABG2959.1; -
Genew; HGNC:17550; KREMENI.
GO, GO:0016021; C:integral to membrane; ISS.
GO; GO:0005624; C:membrane fraction; TAS.
GO; GO:0007154; P:cell communication; TAS.
InterPro; IPR000859; CUB_domain.
InterPro; IPR000899; WSC.
Fam; PF00431; CUB, 1.
Fam; PF00431; Kringle.
Fam; PF00431; Kringle.
Fam; PF00431; Kringle.
Fam; PF00431; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /FTId=VSP 003900.
MISSING (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8; Mismatches
                                                                                     IsoId=Q96MU8-2; Sequence=VSP_003900;
                                           IsoId=Q96MU8-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 1.
SWART; SW00042; CUB; 1.
PROSITE; PS01180; KR; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                EMBL; AB059618; BAB40969.1; -. EMBL; AK056425; BAB71180.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30 M3
206 I
51898 MW;
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44.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 44.1 les 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108 RRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alternative splicing SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29
206 2
475 AA;
                                                                 Name=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
DOMAIN
DOMAIN
DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
VARSPLIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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DVSPWCYV 99

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Marti T., Schaller J., Rickli B.E., Schmid K., Kamerling J.P.,
Marti T., Schaller J., Rickli B.E., Schmid K., Kamerling J.P.,
Gerwig G.J., van Halbeek H., Vliegenthart J.F.;
The Name of J. Inked carbohydrate chains of human, bovine and porcine
to plasminogen. Specificity in relation to sialylation and
Thousylation patterns.",
Eur. J. Biochem. J73:57-63 (1988).

L. FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS
C. FUNCTION: PLASMIN DISSOLVES THE PRINKIN OF UNDER DIASMINGEN
C. FUNCTION: PLASMIN DISSOLVES THE WALLS OF THE
BRYONIC DEVELOPMENT, TISSUE REMODELING, TUMOR INVASION,
AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE
GRAAFIAN FOLLICLE. IT ACTIVATES THE UNDKINASE-TYPE PLASMINGEN
ACTIVATOR, COLLAGENASES AND SEVERAL COMPLENENT ZYMOGENS, SUCH
AS C1 AND C5. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSPONDIN,
C. ILAMININ AND VON WILLEBRAND FACTOR.
C. CAPALYTIC ACTIVITY: Preferential cleavage: Lys-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xaa, Arg-|-Xa
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ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOUND TO
FIBRIN. CANNOT BE ACTIVATED WITH STREFPORINASE.
-i- PTM: N-LINKED GLYCAN CONTAIN N-ACETYLLACTOSAMINE AND SIALIC ACID.
O-LINKED GLYCANS CONSIST OF GAL-GALANC DISACCHRRIDE WITH IS
MODIFIED WITH UP TO 2 SIALIC ACID RESIDUES (MICROHETEROGENEITY).
-i- MISCELLANGOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
IMMEDIATELY AFTER DISSOCIATION FROM THE CLOT.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
-i- SIMILARITY: CORTAINS 5 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=85023311; PubMed=6148961;
Malinowski D.P., Sadler J.E., Davie B.W.;
"Characterization of a complementary deoxyribonucleic acid coding for
human and bovine plasminogen.";
Biochemistry 23:4243-4250(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 27-812, AND CARBOHYDRATE-LINKAGE SITES.
MEDLINE-85203906; PubMed-3846532;
Schaller J., Moser P.W., Dannegger-Muller G.A.K., Rosselet S.J.,
Kampfer U., Rickli E.E.;
"Complete amino acid sequence of bovine plasminogen. Comparison with
                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
Bovidae, Bovinae, Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Berglund L., Andersen M.D., Petersen T.E.; "Cloning and characterization of the bovine plasminogen cDNA.";
                                                                                                         Last sequence update)
Last annotation update)
                        812 AA
                                                                                                                                                               Plasminogen precursor (EC 3.4.21.7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Biochem. 149:267-278(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dairy J. 5:593-603(1995).
                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 706-812 FROM N.A.
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                     STANDARD;
taurus (Bovine)
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human plasminogen.
                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Liver;
PLMN_BOVIN
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and for commercial
           (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    315 NRTPENFPCKNLEENYCRNPNGEKAPWCYTTN--SEVRWEYCTIPS-----CESSPLST 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   367 ERMDVPVPPEQTPVPQDCYHGNGQSYRGTSSTTITGRKCQSWSS-----MTPHRHLKTPE 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50 -------CYBGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAH---RS
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                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Plasma; Glycoprotein; Fibrinolysis;
Tissue remodeling; Blood coagulation; Kringle; Zymogen; Repeat;
Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 812;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    335 N -> D (IN REF. 2).
555 P -> L (IN REF. 2).
555 P -> L (IN REF. 2).
744 T -> R (IN REF. 3).
91216 MM; 38A6AA691E220946 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SERINE PROTEASE.
N-LIRKED (GLCNAC. .).
FTIG-CAR_000014.
O-LIRKED (GALNAC. .).
/FTIG-CAR_000015.
  Usage
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CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
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PLASMIN LIGHT CHAIN
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8.2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19.7%; Scur.
28.3%; Pred. No. b.z.
24.3%; Pred. No. b.z.
28.3%; Pred. No. b.z.
modified and this statement is not removed. entities requires a license agreement (See Por send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                            PLASMINOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRINGLE 1.
KRINGLE 2.
KRINGLE 3.
KRINGLE 4.
                                                                                                                                                     InterPro; IPR003609; Pan app.
InterPro; IPR003966; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; kringle; 5.
Pfam; PF00024; PAN; 1.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRINGLE 5
                                                        EMBL; K02935; AAA30714.1; -.
PIR, $45046; PLBO.
HSSP; P00747, 2PK4.
MEROPS; S01.233; -.
GlycoSuiteDB; P06868; -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR003014; RAingle.
                                                                                                                                                                                                                                                               Probom; PD000395; Krimingerin.
SMART; SM00130; KR; 5.
SMART; SM00130; KR; 5.
SMART; SM00020; TryD SPc; 1.
PROSITE; PS00021; KRINGLE 1; 5.
PROSITE; PS50004; KRINGLE 2; 5.
PROSITE; PS500040; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
                                                                                                                                                                                                                               PRINTS; PRO0722; CHYMOTRYPSIN. PRINTS; PRO01504; KRINGLE.
PROTRINTS; PRO1505; PROTHROBEIN. PRODOM; PD000395; Kringle; 5.
                                              EMBL; X79402; CAA55939.1; -. EMBL; K02935; AAA30714.1; -.
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nes 47; Conservative
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Search completed: December 3, 2003, 14:40:07 Job time : 5.33777 secs

us-09-880-503-4.rsp

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RA Bai X., Fu J., Wang W., Xi X., Ruan C.;
RA Bai X., Fu J., Wang W., Xi X., Ruan C.;
RA Bai X., Fu J., Wang W., Xi X., Ruan C.;
Ra "Overexpression of the amino-terminal fragment of human urokinase-type plasminogen activator in breast cancer.";
RT "Overexpression of the amino-terminal fragment of human urokinase-type plasminogen activator in breast cancer.";
RI "Overexpression of the EMBL/GenBank/DDBJ databases.
Lumor invasion, growth and angiogenesis.";
RILL Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
CC -1- SIMILARITY: CONTAINS I RRINGIE DOMAIN.
DR EMBL, AV029537; AAKS8734.1; -.
DR InterPro; IPR006209; EGF like.
DR InterPro; IPR006210; EGF.
DR PRODON; PD000018; KRNGLE.
DR PRODON; PD000018; KRNGLE.
DR SWART; SW00181; EGF; 1.
DR SWART; SW00181; EGF; 1.
DR PROSITE; PS00021; KRINGLE_1; 1.
DR PROSITE; PS00021; KRINGLE_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Urokinase-type plasminogen activator amino-terminal fragment
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Q9ce12 mus musculu
Q9tuy2 mus musculu
Q9xt70 oryctologus
Q8xq23 sus scrofa
Q8xq23 sus scrofa
Q8xq23 cus corofa
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Q8izz5 homo sapien
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Maximum Match 100%
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sp_virus:*
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Q9bzwl homo sapien Q8ng20 homo sapien Q90675 gallus gall Q8axx3 xenopus lae Q8axy6 gallus gall Q91691 xenopus lae Q8wmrl canis famil Q9r0w3 rattus norv Q90790 xenopus lae Q9bxb6 homo sapien Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q8bxp9 mus musculu Q15146 homo sapien Q15146 homo sapien Q15148 homo sapien Q15106 xenopus lae Q80x0 xenopus lae Q80x0 xenopus lae Q80x0 xenopus lae Q80x0 xenopus lae Q80x0 xenopus lae Q80x0 mus musculu Q8bxp6 mus musculu Q8bxp6 mus musculu Q8bxp6 mus musculu	homo homo homo
4 Q9BZWI 4 Q8NGZ0 Q80GZ0 Q90G75 13 Q9AXY6 13 Q9AXY6 14 Q9EQ16 16 Q9ERB6 11 Q9BRD9 11 Q9BGIO 10 Q6EQ10 11 Q9BGIO 12 Q9UIR7 4 Q9UIR7 4 Q9UIR7 4 Q9UIR7 4 Q9UIR7 11 Q8RQQB 11 Q8RQQB 11 Q8RQQB 11 Q8RQQB 11 Q8RQQB	096GL8 09BTP9 08NCW1
	00244 00244 0042
2228 2222 2222 2222 2222 2222 2222 222	
2010	4 4 4 4
11110000000000000000000000000000000000	4 4 4 4 9 6 4 8

## ALIGNMENTS

154 AA.

PRT;

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RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                        81 RGKANTDIMDRPCLAWNSANVLTKTYHAHRPDALQLGLGKHNYCRNPDHQRRPWCYVQVG 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81 RGKANTDIMDRPCLAMNSANVLTKTYHAHRPDALQLGLGKHNYCRNPDHQRRPWCYVQVG 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Complete dds.";

Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

-: SIMILARITY: CONTAINS I WRINGLE DOWAIN.

BREL; BAR08224; BAR02685.1; -.

InterPro; IPR001314; Chymotrypsin.

InterPro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; Ser_Interpro; IPR001254; Ser_Interpro; IPR001254; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Ser_Interpro; Se
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yano W., Watanabe M.;
"Oryctolagus cuniculus urokinase-type plasminogen activator, mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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Sugiki M., Yoshida E., Anai K., Maruyama M.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                          01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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                                                                                                                                                                                                                                      433 AA
                                                                                                                                                                                                                                                                                                                                          Urokinase-type plasminogen activator.
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                                                                                    119 LKPLVQECMVHDCADGK 135
                                                                                                            || |:||| |||||
LKQLIQECKVHDCSSGK 157
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les 105; Conserv
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Matches
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                                                                                                                                                                                                                                    61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                  1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
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PRINTS; PR00722; CHYMOTYPSIN.
PRINTS; PR00018; KRINGLE.
ProDom; PR000130; KR.
SMART; SM00130; KR.
SMART; SM00020; Tryp. SPC; 1.
PROSITE; PS00021; TRNIGLE 1; 1.
PROSITE; PS00013; TRYPSIN. DOM; 1.
PROSITE; PS00134; TRYPSIN. DOM; 1.
PROSITE; PS00135; TRYPSIN. HIS; 1.
PROSITE; PS00135; TRYPSIN. Kinagle; Protease; Serine protease.
SEQUENCE 433 AA; 48375 MW; 65E64F36415549B0 CRC64;
                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Increased expression of urokinase during atherosclerotic lesion development causes arterial constriction and lumen loss, and development causes arterial constriction and lumen loss, and proc. Natl. Acad. Sci. U.S.A. 99:10665-10670(2002).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
BELL, ANIZL2285, AAM83187.1, -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF_like.
InterPro; IPR001254; Sci. Proclease_Try.
Pfam; PF0001; kringle.
InterPro; IPR001254; Sci. proclease_Try.
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                                                                  Length 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22155945; PubMed=12149463;
Falkenberg M., Tom C., DeYoung M.B., Wen S., Linnemann R.,
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                                                              Score 778; DB 4; Length 15
Pred. No. 1.8e-77;
0; Mismatches 1; Indels
      Glycoprotein, Kinase, Kringle.
SEQUENCE 154 AA, 17305 MW; A3CCF2FCFF505572 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last amotation update)
Urokinase-type plasminogen activator.
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76.6%; Pred. No. 1.1e-57;
iive 10; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         433 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                  98.1%;
99.3%;
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Matches 105; Conservative
                                                                                    Local Similarity .nes 133; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
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Pfam; PF00089; trypsin;
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                                                                    Query Match
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Q8MIL0
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Gaps

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PRT;
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SEQUENCE 516 A
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Q9BU99
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                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                   Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos. MCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
VCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Ovary;
MEDLINE=22354683; PubMed=12466851;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 69.4%; Score 550; DB 6; Length 157; I Similarity 75.6%; Pred. No. 1.8e-52; 93; Conservative 11; Mismatches 19; Indels
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                                                                                                           01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen activator (Fragment).
                                                          157 AA
                                                                                                                                                                                                     Urokinase plasminogen activator (Fragment).
                                                          PRT;
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                                                          PRELIMINARY;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69 RPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 SNCDCLNGGTCVSNKYFSNIHWCNCPFKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMG 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30 SNCGCQNGGVCVSYKYFSRIRRCSCPRKFQGEHCRIDASKTCYHGNGDSYRCKANTDTKG 89
"Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";
Nature 420:563-573 (2002).
EMBL; AKOS4349; BAC35743.1; -.
NON TER 231 231
SEQÜENCE 231 AA, 25510 MW; 25E8980A682737F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
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Straubberg R.;
Submitted (PEB-2001) to the EMBL/GenBank/DDBJ databases.
L. Submitted (PEB-2001) to the EMBL/GenBank/DDBJ databases.
Straubberg R.;
Submitted (PEB-2001) to the EMBL/GenBank/DDBJ databases.
L. SIMILARITY: CONTAINS INTRIBED DOWAINS.
EMBL; BC002795; AAND7AJS.1; -.
RESP: POOTOSO; LASH.
RICEPPO; IPRO06209; EGF_like.
RICEPPO; IPRO06210; EGF_like.
RICEPPO; IPRO00201; Kringle.
RICEPPO; IPRO0011; Kringle; 2.
REAM: PRO0011; Kringle; 2.
REAM: PRO0011; KRINGLE.
RINTS; PR00139; KRINGLE.
ROOM; PR00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RART; SM00130; KR; 2.
RECSITE; PS00021; KRINGLE 1; 2.
RROSITE; PS00014; KRINGLE 1; 2.
RROSITE; PS00134; TRYPSIN HIS; 1.
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                                                                                                                                                                                                                                                                                                                                 Query Match 69.1%; Score 548; DB 11; Length 231; Best Local Similarity 71.7%; Pred. No. 4.5e-52; Matches 91; Conservative 13; Mismatches 23; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               516 AA; 57370 MW; BAB31901FDC96800 CRC64;
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similar to plasminogen activator, tissue. Homo sapiens (Human).
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67 MGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQEC 126
                                   RGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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REAPERO; IPRO01231; ...

REAPERO; IPRO01254; Ser_Drotease_Try.

InterPro; IPRO01254; Ser_Drotease_Try.

REAPERO089; trypsin. 1.

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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
T-Plasminogen activator.
Sus scrofa (Pig).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Urokinase-type plasminogen activator (Fragment).
Oryctolagus cuniculus (Rabbit).
Oryctolagus cuniculus (Rabbit).
Makaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39.5%; Score 313; DB 6; Length 214; 78.3%; Pred. No. 2.4e-26; ive 5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Lung;
Yin J., Idell S.,;
"Partial mana of rabbit uPA.";
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; AF097647; AAD39351.1; -.
HSSP; P00749; IEJN.
                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                              214 AA.
                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                             119 LKPLVQECMVHDCADGK 135
                                                                                                                                                                                       193 GKYTTEFCSTPACPKGK 209
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Q8SQ23;
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                                                                                                                                                                                          82 YEDQGISYRGTWSTAESGAECTNWNSSALAQKPYSGRRPDAIRLGLGNHNYCRNPDRDSK 141
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            20
                                                                      81
                                                         23 SQEIHARFRRGARSYQGCSEPRCFNGGTCQQALYFSDF-VCQCPEGFAGKCCEIDTRATC
            SNETH------OVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00135; TRYPSIN_SER; 1.
EGF-like domain; Glycoprotein; Hydrolase; Kringle; Protease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberger R.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

-: SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-:- SIMILARITY: CONTAINS 2 KRINGLE DOWAINS.
REMB; BC011256; AAH11256.1; -.
RHSP: PR0011314; CHymotrypsin.
R InterPro; IPR006209; BGF_like.
R InterPro; IPR00639; Fibrncthi.
R InterPro; IPR00601; Kingle.
R InterPro; IPR00639; Fibrncthi.
R InterPro; IPR00639; Fibrncthi.
R Pfam; PF00008; EGF; 1.
Pfam; PF00008; EGF; 1.
R Pfam; PF00008; KRINGLE.
R PRINTS; RR00722; CHYMOTRYPSIN.
R PRINTS; RR00181; EGF; 1.
R SWART; SM00181; EGF; 1.
R SWART; SM00181; EGF; 1.
R SWART; SM00101; KR; 2.
R SWART; SM00101; KR; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           559 AA; 63122 MW; 8CCEE2BDB94514D9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               559 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similar to plasminogen activator, tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWART; SMUULLU; AAF, SPC; 1.
SWART; SMUULLU; AAF, SPC; 1.
PROSITE; PS01022; BGF_1; 1.
PROSITE; PS01186; BGF_2; 1.
PROSITE; PS01253; FIBRONECTIN 1; 1.
PROSITE; PS00021; KRINGLE 1; 2.
PROSITE; PS50240; TRYPSIN HIS; 1.
PROSITE; PS00134; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
                                                                                                                                                                                                                                                           111 PWCYVQVGLKPLVQECMVHDCADG 134
                                                                                                                                                                                                                                                                                                                     PWCYVFKAGKYSSEFCSTPACSEG 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE=Breast tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 61; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serine protease
SEQUENCE 559 2
                                                                                                                                                                                                                                                                                                                           142
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201020
201020
AC 09104
AC 09104
AC 09104
DD 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD DT 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 01-DD 0
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SEQUENCE FROM N.A. TISSUE=Kidney;
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SEQUENCE 564 7
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Q8K0D2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 RGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                           5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.2%; Score 310.5; DB 6; Length 562; 43.8%; Pred. No. 1.3e-25; ative 14; Mismatches 58; Indels 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sugiki M., Yoshida E., Anai K., Maruyama M.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
EMBL; AY0299518; AAK40240.1;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     562 AA; 63668 MW; F9E6B4C77CB101E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Tissue-type plasminogen activator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 LKPLVQECMVHDCADGK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKYSPDFCSTPACTKEK 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 43.8%
Les 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
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SEQUENCE FROM N.A.
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                 NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Serine protease.
SEQUENCE 562 A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8MKB1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8MKB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. VCBI_TaxID=10090;
         INTERFYO'S 1 LEWOULS14; CAPPOINTED IN INTERFYOR 1 LEWOULS14; CAPPOINTED INTERFORM 1 LEWOOLS 1 LEWOULS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LEWOOLS 1 LE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
38.0%; Score 301.5; DB 6; Length
Best Local Similarity 48.7%; Pred. No. 1.2e-24;
Matches 56; Conservative 13; Mismatches 41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564 AA; 62726 MW; 459D8BAC6D4A937C CRC64;
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01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2002 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein.
Mus musculus (Mouse).
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001881; EGF 2.
InterPro; IPR006210; EGF 1; EnterPro; IPR006210; IBGF.
InterPro; IPR00001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 2.
Pfam; PF000051; Kringle.
Pfam; PF000051; Kringle.
Pfam; PF000051; Kringle.
Pfam; PF000151; CHYPSin; 1.
PRINTS; PR00722; CHYPSIN.
Chymotrypsin
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PRELIMINARY;
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Pfam; PF00039; fn1; 1
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                                                                                                                                                                                                                                                                                                                                                                                   Serine protease
SEQUENCE 560 A
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277 S 277
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                        R SMART; SMO0181; EGF; 3.

R SMART; SMO0130; KR; 1.

R PROSITE; PS00120; Tryp SPC; 1.

R PROSITE; PS01186; EGF_2; 2.

R PROSITE; PS50101; KRINGLE 1; 1.

R PROSITE; PS50201; KRINGLE 1; 1.

R PROSITE; PS50213; TRYPSIN HZ; 1.

R PROSITE; PS00134; TRYPSIN HZ; 1.

R PROSITE; PS00135; TRYPSIN HZ; 1.

R HYPOCHELICAL proceden; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF_1; EGF
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SEQUENCE FROM N.A.
MEDLINE=96425001; PubMed=8827452;
Choi-Miura N.H., Tobe T., Sumiya J., Nakano Y., Sano Y., Mazda T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Purification and characterization of a novel hyaluronan-binding protein (PHBP) from human plasma: it has three BGF, a kringle and serine protease domain, similar to hepatocyte growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        014520; 000663;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
HGF activator like protein (Hyaluronan binding protein 2).
Homo sapiens (Human).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 42.5%; Pred. No. 1.3e-20;
Matches 51; Conservative 18; Mismatches 48; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R.;
submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-! SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; A99742; BAA68576.1; -.
EMBL; BS3182; AA846999.1; -.
EMBL; BC031412; AAH31412.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kitamura N.;
Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     560 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEROPS, S01.033, -.
Genew, HWAR.24784, HABP2.
InterPro, IPR001314, Chymotrypsin.
InterPro, IPR006209, EGF_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Biochem. 119:1157-1165(1996)
                                     PD000395; Kringle; 1.
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TISSUE=Colon, and Kidney;
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   PRINTS; PR00018; KRINGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P00763; 1DPO.
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                                     ProDom;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73 PWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQE-CMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13 CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
R PEAM, PF00051; kringle; 1.
R PRINTS; PR00129; trypsin; 1.
R PRINTS; PR00129; CHYMOTRPSIN.
R PROSTTS; PR00129; Kringle; 1.
R PROSITE; PS00022; EGF 1; 3.
R PROSITE; PS00021; KRINGLE 1; 1.
R PROSITE; PS00012; KRINGLE 2; 1.
R PROSITE; PS00014; KRINGLE 2; 1.
R PROSITE; PS00134; TRYPSIN IN DOM; 1.
R PROSITE; PS00135; TRYPSIN HIS; 1.
R PROSITE; PS00135; TRYPSIN HIS; 1.
R PROSITE; PS00135; TRYPSIN ESR; 1.
R PROSITE; PS00135; TRYPSIN ESR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 32.5%; Score 257.5; DB 4; Length 560; Best Local Similarity 42.1%; Pred. No. 8.1e-20; Matches 51; Conservative 18; Mismatches 49; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Liver;
Takahashi T., Kihara T.;
Takahashi T., Kihara T.;
"Porcine liver factor XII.";
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOWAIN.
EMBL; P00763; 1DPO.
MEROPS; S01.211; --
                                                                                                                                                                                                                                                                                                                                                                                                              560 AA; 62671 MW; 5C1907230784ACD4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-WAY-1999 (TrEMBLrel. 10, Created)
01-WAY-1999 (TrEMBLrel. 10, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              616 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000562; FN Type_II.
InterPro; IPR000610; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PP00040; fn2; 1.
Pfam; PP00081; kringle; 1.
Pfam; PR00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00013; FNTYPEII.
PRINTS; PR00018; KRINGLE.
ProDom; PD000995; FN_TYPEII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro, IPR001314; Chymotrypsin.
InterPro, IPR000742; EGF_2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR006209; EGF like.
InterPro; IPR000083; Fibrncthl.
InterPro; IPR000562; FN_Type II
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239 HTACLSSPCLNGGTC-----HLIVGTGTSVCTCPLGYAGRFCNIVPTEHCFLGNGT 289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 HQVPSNCDCLNGGTCVSNKYFSNIHW-----CNCPKKFGGQHCEIDKSKTCYEGNGH 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57 FYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYV 115
R ProDom; PD000395; FN Type_II; 1.

R SMART; SM00018; EGF; 2.

R SMART; SM00018; EGF; 2.

R SMART; SM00029; FRZ; 1.

R SMART; SM00020; TRYP SPC; 1.

R PROSITE; PS01022; EGF_2; 2.

R PROSITE; PS01023; FIBRONECTIN 1; 1.

R PROSITE; PS01023; FIBRONECTIN 2; 1.

R PROSITE; PS00021; KRINGLE 1; 1.

R PROSITE; PS00013; KRINGLE 1; 1.

R PROSITE; PS0013; KRINGLE 2; 1.

R PROSITE; PS0013; TRYPSIN DOM; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN HIS; 1.

R PROSITE; PS0134; TRYPSIN SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31.6%; Score 250.5; DB 11; Length 653; 42.0%; Pred. No. 5.6e-19; ive 11; Mismatches 41; Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schloesser M., Schwager S., Engel W.; Schloesser M., Schwager S., Engel W.; Schloesser M., Schwager S., Engel W.; Schloesser M. Schloesser M. Schloesser M. Schloesser M. Schloesser M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M. State M.
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SEQUENCE 653 AA; 70553 MW; FE18D90174ED6FDD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Factor XII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00040; fn2; 1.
Pfam; PF00051; kringle; 1.
Pfam; PF00059; trypsin; 1.
PRINTS; PR0072; CHYMOTRYPSIN.
PRINTS; PR0013; FNTYPEII.
PRINTS; PR00195; KRINGLE.
Probom; PD000995; FN Type II; 1.
Probom; PD000395; Kringle; II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 42.0%
Les 50; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        035727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  035727
                    ò
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176 QVCSINPCLNGGSCLQTE---GHRLCRCPIGYAGRLCDVDLKERCYSDRGLSYRGMAQTT 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 LSGAPCQPWAS----EATYWNMTAEQALNWGLGDHAFCRNPDNDTRPWCFVWRGDQLSWQ 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66 TMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQ 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 QVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                  R SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | SMART; SMOOLS | FULL | 1. | PROSITE; PSOOLS | FULR | FULL | 1. | PROSITE; PSOOLS | FULR | 1. | PROSITE; PSOOLS | FULR | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | PROSITE; PSOOLS | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL | 1. | FULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32.4%; Score 257; DB 6; Length 616; 40.9%; Pred. No. 1e-19; Live 14; Mismatches 53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUB-Liver;
Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; BC019376; AAH19376.1; -.
HSSP; P00761; 1AN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    616 AA; 68012 MW; 4CSFE3D71EBBD1A9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-WAR-2002 (TrEMBLrel. 20, Created)
01-WAR-2002 (TrEMBLrel. 20, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IRR001314; Chymotrypsin.
InterPro; IRR001314; Chymotrypsin.
InterPro; IRR000742; EGF 2.
InterPro; IRR00083; Fibrnctin.
InterPro; IRR000562; FN Type_II.
InterPro; IRR000562; FN Type_II.
InterPro; IRR00001; Kringle.
InterPro; IRR00001; Kringle.
InterPro; IRR00001; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00040; fn2; 1.
Pfam; PF00081; kringle; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00013; FWYPEII.
PRINTS; PR00018; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical 70.6 kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 40.9
nes 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00008; EGF; 2
Pfam; PF00039; fn1; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289 YCRLARC 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 ECMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Serine protease
SEQUENCE 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08VCS4
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DR DR DR DR KW KW KW KW

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30 WCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRS 89
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
MCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
NON TER 395 395
SEQÜENCE 395 AA: 44122 MW. .......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90 DALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDCA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAQALGLGKHNYCRNPDGDAKPWCHVLKNRLLTWEYCDVPSCS 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dou D.;
"Production of kringle fragment.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; AF282882; AAMS2248.1;
                                                                                                                                    "A brain-type plasminogen activator.";
Submitraed (APR-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen/activator kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 28.9%; Score 229.5; DB 4
Best Local Similarity 42.7%; Pred. No. 6.5e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90 AA
                                                                                                                                                                                                                         HSSP; P00756; 1PK2.
InterPro; IPK001314; Chymotrypsin.
InterPro; IPR0000083; Fibrnctnl.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                           INCERPYO; IPRUO1224; SET PROCESSE_ITY
FERM; PF00039; Kringle; 1.
PFAM; PF00039; Kringle; 1.
PRINTS; PR00722; CHYMOTRYPSIN; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PROOTS; CHYMOTRYPSIN.
PROOTS; RAINGLE.
SWART; SW000395; KRINGLE.
SWART; SW000395; KRINGLE.
SWART; SW000395; KRINGLE.
SWART; SW000395; KRINGLE.
PROSITE; PS00125; FIBRUALE.
PROSITE; PS00021; KRINGLE.
PROSITE; PS00021; KRINGLE.
PROSITE; PS00034; TRYPSIN HIS; 1.
PROSITE; PS00034; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00130; KR; 1.
PROSITE; PS00021; KRINGLE 1; 1.
                                                                                                                                                                                                               EMBL; AF260825; AAK11956.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000001; Kringle.
Pfam; PF00051; kringle; 1.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                     SEQUENCE FROM N.A.
                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8NG20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 18
Q8NG20
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                                 g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  73 PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL 72
                                                                                                                                                                                                                                                                                                                                                                                                                             CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKASTDTMGRPCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
DR SWART; SM00181; EGF; 2.

DR SMART; SM00059; FN1; 1.

DR SMART; SM00059; FN2; 1.

DR SMART; SM00020; KR; 1.

DR SWART; SM00020; TYP; 3PC; 1.

DR PROSITE; PS01020; EGF_1; 2.

DR PROSITE; PS01023; FIBRONECTIN_2; 1.

DR PROSITE; PS00023; FIBRONECTIN_2; 1.

DR PROSITE; PS000023; FIBRONECTIN_2; 1.

DR PROSITE; PS00007; KRINGLE_1; 1.

DR PROSITE; PS00007; KRINGLE_2; 1.

DR PROSITE; PS00003; FIBRONECTIN_2; 1.

DR PROSITE; PS00003; FIBRONECTIN_2; 1.

DR PROSITE; PS00003; FIBRONECTIN_2; 1.

RROSITE; PS00003; FIBRONECTIN_2; 1.

DR PROSITE; PS00013; TRYPSIN_HIS; 1.

RGF-like domain; Glycoprotein; Hydrolase; Kringle; Protease; GW Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

Wada H., Nishioka J., Nakatani K., Kasai Y., Abe Y., Nobori T.,
"Molecular chracterization of coaggulation factor XII-Mie.",
Submitted (NOV.2002) to the EMBL/GenBank/DDBJ databases.

EMBL, AB095845; BAC23095.1; -.
SEQUENCE 615 AA; 67735 MW; 030508870A0C7EDB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                        Length 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 29.4%; Score 233; DB 4; Length 615; Local Similarity 42.3%; Pred. No. 4.3e-17; Les 44; Conservative 12; Mismatches 40; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PWAS----BATYRNVTAEQARNWGLGGHAFCRNPDNDIRPWCFV 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDNRRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                    Query Match 31.4%; Score 249; DB 11; Length 5 Best Local Similarity 40.8%; Pred. No. 7.4e-19; Matches 49; Conservative 14; Mismatches 49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9BZW1;
01-JUN-2001 (TrEMBLrel. 17, Cr
01-JUN-2001 (TrEMBLrel. 17, La
01-MAR-2003 (TrEMBLrel. 23, La
Neonatal thrombolytic agent al
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. 23, (TrEMBLrel. 23, (TremBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coagulation factor XII-Mie.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
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01-MAR-2003
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PRELIMINARY;
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Receptor; Kinase
                                                                                                                                              NCBL_TaxID=8355;
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            OBAXX3
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                                                                                             50 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 109
                                                                                                              8 CYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30 WCNCPK--KFGGQHCE-----IDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVL 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12 WCYVFKAGKYISEFCSTPACTKVAEEDGDCYTGNGLAYRGTRSRTKSGFSCLPWNPVFLT
                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=White Leghorn;
MEDLINE=97199025; PubMed=9047000;
MEDLINE=97199025; PubMed=5047000;
"Cohnson A.L., Bridgham J.T., Anthony R.V.;
"Expression of avian urokinase and tissue-type plasminogen activator messenger ribonucleic acid during follicle development and atresia.";
Biol. Reprod. 56:581-588(1997)
Piol. SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
                                                                                                                                                                                                                                                                                                               Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 QQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHDC 131
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                                             Score 218.5; DB 4; Length 90;
Pred. No. 2.1e-16;
5; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202 AA; 23148 MW; 049DB42941D83AFC CRC64;
           Glycoprotein; Kringle.
SEQUENCE 90 AA; 9804 MW; A33887F9FDF4C7B1 CRC64;
                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Tissue-type plasminogen activator (Fragment).
                                                                                                                                                                                                                                202 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS, SOI.232; -.
InterPro, IPRO00001; Kringle.
InterPro, IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 2.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 2.
                                                                                                                                              110 RPWCYVQVGLKPLVQECMVHDCA 132
                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                   68 кРИСУТ-ТИРККІУ БУСБУРОСА 89
                                                                                                                                                                                                                                PRT;
PS50070; KRINGLE_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00021; KRINGLE_1; 1. PROSITE; PS50070; KRINGLE_2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; U31988; AAA74955.1; -.
HSSP; P00750; 1RTF.
                                                          48.48;
                                                27.6%;
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                                                                        41; Conservative
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                                                                                                                                                                                                                                PRELIMINARY;
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                                                          Best Local Similarity
Matches 41; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9031;
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 PROS. TE;
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RESULT 20

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 HPELSE---CFTVNGRDYRGTVSQAGPEGTPCLYWNQTT--QHLYNAQSDPDGELGLGNH 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 LHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRGKAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 HCEIDKSKTCYEGNGHFYRGKAS-TDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDINBE-20538710; PubMed=11083926; ID F.C., Glass D.G., Gies D.R., Cheung J., Lai K.O., Fu A.K., Yancopoulos G.D., Ip N.Y.; "Cloning and characterization of muscle-specific kinase in chicken.";
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=22308873; PubMed=12421700;
MEDLINE=22308873; PubMed=12421700;
MEDLINE=22308873; PubMed=12421700;
Mixemen proteins in. Parco Barrantes I., Niehrs C.;
"Kremen proteins in.";
CNS patterning ";
Development 129:5587-559(2002).
BENBL; AN150813; AAN64661.1; --
SEQUENCE 421 AA; 46274 MW; 74D04DB1682CD15F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AX143173; AAN05008.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           947 AA; 105588 MW; E6C3FCC5796CC8BE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Muscle-specific receptor tyrosine kinase MuSK.
                                                                                 Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 21.9%; Score 174; DB 13; Best Local Similarity 47.4%; Pred. No. 8.4e-11; Matches 36; Conservative 6; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.5%; Score 170.5; DB 13
32.4%; Pred. No. 4.9e-10;
iive 13; Mismatches 34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              947 AA
421 AA
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                                                                                                                                                                                                      Xenopus laevis (African clawed frog)
                                                      Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78 NYCRNPDADVQPWCYV 93
                                                   01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 32.4 les 46; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (Chicken).
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359 AA;
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SEQUENCE
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    ||||||
----ENYCRNPGGENERPWC 526
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Growth factor Livertine.

Bukaryota: Metazoa; Ghordata; Craniata; Vertebrata; Buteleostomi;

Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
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Ruiz i Altaba A., Thery C.;
Submitted (MAY-1996) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: CONTAINS' 4 KRINGLE DOWAINS.
EMBL, 105485; ABB52574.1; -.
HSSP; P00747; 1CEA.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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479 VTASGIPCOKWS-----DQAPHLHRRTPQVFPELSDA-
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InterPro; IPR0010001; Kringle.
InterPro; IPR003014; PAN.
InterPro; IPR003609; Pan app.
InterPro; IPR003966; Prothrombin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; kringle; 4.
Pfam; PF00089; trypsin; 1.
                                                                                                                       114 YVQVGLKPLV--QECMVHDCAD 133
                                                                                                                                                                                                         527 YTK---DPSVTWEYCSVSPCGD 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0722; CHYMOTRYBSIN.
PRINTS; PRO018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
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01-MAR-2002 (TrEMBLrel. 20,
01-MAR-2002 (TrEMBLrel. 20,
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NCBL_TaxID=8355;
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211 NRTPENFPCKN----LDENYCRNPDGETAPWCYTTNSEVRWEHCQIPSCESSPITTEYLD 266
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                                                                                                                                                                                                                             SEQUENCE FROM N.A. Pittle School B., Chan R., Kisker O., Pittle-Shepherd S.R., Coffman K.T., Resnick D., Chan J., Waters D.J.; "Angiostatin is Detectable in the Urine of Dogs with Spontaneous Bone "Angiostatin is Detectable in the Urine of Dogs with Spontaneous Bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 HOVPSNCDCLNGGTCVSNKYFSN----IHWC-NCPKKFGGQHCEIDKSKT-----
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 359;
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Bangert K., Johnsen A.H., Thorsen S.;
"Rat plasminogen: cDNA and gene structure.";
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.

-!- SIMILARITY: CONTAINS 4 KRINGLE DOMAINS.

EMBL, AR069985, AAL58919.1; -.

ILLAFPCO; IPR000001; Kringle.

ILLEFPCO; IPR003966; Prothrombin.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAX-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen protein precursor (EC 3.4.21.7).
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.9%; Score 165.5; DB 6 29.0%; Pred. No. 6.1e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            812 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93 ---QLGLGKHNYCRNPDNRRRPWCY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320 HFPEAGL-TMNYCRNPDADKSPWCY 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=91250378; PubMed=1645711;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00051; kringle; 4.
PRINTS; PR00018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
ProDom; PD000395; Kringle; 4.
SWART; SM00130; KR; 4.
PROSITE; PS00021; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 29.03
Matches 42; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                  (Fragment)
                                  Plasminogen (Fragment)
Canis familiaris (Dog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glycoprotein; Kringle.
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42 CEIDKSKTCYEGNGHFYRGKASTDTM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKH 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22 CSDSFHSECYTVNGADYRGTQNQTSLDGGKPCLFWNE--TFQHPYNTLKYPNGEGGLGEH 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 NELHQVP-----SNCDCLNGGTCVSNKYFS-----NIHWCNC-----PKKFGGOH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R InterPro; IPR00024; Fz domain.
R InterPro; IPR00024; Fz domain.
R InterPro; IPR0002598; Ig_c2.
R InterPro; IPR000306; Ig_MHC.
R InterPro; IPR000001; Krīngle.
R FinterPro; IPR000001; Krīngle.
R Ffam; PF00047; Ig; 1.
R PF101392; Pz; 1.
R PF00047; Ig; 1.
R RF10018; FK1NGLE.
R SMART; SM0018; KR1NGLE.
R SMART; SM00130; KR1; 1.
R PR051TE; PS50035; IG_LIKE; 1.
R PR051TE; PS50031; Fz; 1.
R PR051TE; PS50070; KRLNGLE 2; 1.
R PR051TE; PS50070; KRLNGLE 2; 1.
R PR051TE; PS50070; KRLNGLE 2; 1.
C RAGENCE 393 AA; 43825 MW; IF93DCBBBBF53855 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.0%; Score 158.5; DB 4; Length 393; 29.7%; Pred. No. 3.9e-09; ive 14; Mismatches 51; Indels 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 20.1%; Score 159; DB 13; Length 452; Best Local Similarity 40.8%; Pred. No. 4e-09; Matches 31; Conservative 9; Mismatches 32; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
Similar to receptor tyrosine kinase-like orphan receptor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL, BC006374; AAH06374.1; -.
HSSP; P00747; 1CEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                      50188 MW; ED24BCD1AF4564E2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   393 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
InterPro; IPR000859; CUB domain.
InterPro; IPR000001; Kringle.
InterPro; IPR002899; WSC.
InterPro; IPR002899; WSC.
InterPro; IPR002899; WSC.
InterPro; IPR002899; WSC.
InterPro; IPR00181; Kringle; I.
PRIMTS; PR000181; KRINGLE.
PRODOM; PD000395; KRINGLE.
SWART; SW00042; CUB; I.
PR051TE; PS01180; CUB; I.
PR051TE; PS01180; CUB; I.
PR051TE; PS01021; KRINGLE_1; I.
Glycoprotein; Kringle.
SEQUENCE 452 AA; 50188 MW; ED2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 NYCRNPDNRRRPWCYV 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80 NYCRNPDGDVSPWCYI 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 29.7%
les 43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. TISSUE=Muscle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9BRB6
Q9BRB6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308 NRTPENFPCKN----LEENYCRNPDGETAPWCYTTDSQLRWEYCEIPSCGSSVSPDQSDS 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 HQVPSNCDCLNGGTCVSNKYFSN----IHWC-NCPKKFGGQHCEI-----DKS-- 47
                                                                                                                                                                                                                                                                                                                                                                    R PERMY: PRO0029; LTYPSIN; 1.

R PRINTS; PR00129; LTYPSIN; 1.

R PRINTS; PR00129; RAINGLE.

R PRINTS; PR01019; RAINGLE.

R PRODOM; PD000395; KTINGLE.

R SMART; SM00473; PAN_AP; 1.

R SMART; SM00473; PAN_AP; 1.

R SMART; SM00201; KRINGLE 1; 5.

R PROSITE; PS0001; KRINGLE 2; 5.

R PROSITE; PS00134; TRYPSIN DM; 1.

R PROSITE; PS00134; TRYPSIN DM; 1.

R PROSITE; PS00135; TRYPSIN DM; 1.

R PROSITE; PS00135; TRYPSIN DM; 1.

R PROSITE; PS00135; TRYPSIN DM; 1.

R Glycoprotein; Hydrolase; Kringle; Protease; Serine protease; Signal.

T SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48 -----KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQL--- 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

MEDLINE=21167372; PubMed=11267660;
Nakamura T., Aoki S., Kitajima K., Funakoshi H., Takahashi T.,
Nakamura T., Aoki S., Kitajima K., Funakoshi H., Takahashi T.,
Matsundor K., Nakamura T.,
"Molecular cloning and characterization of Kremen, a novel kringle-
containing transmembrane protein.";
Biochim. Biophys. Acta 1518:63-72 (2001).
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
-!- SIMILARITY: CONTAINS 1 CUB DOMAIN.
EMBL; AB070851; BAB64294.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi;
Amphibia, Batrachia, Anura, Mesobatrachia; Pipoidea, Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.8%; Score 165; DB 11; Length 812; 29.0%; Pred. No. 1.7e-09; tive 20; Mismatches 49; Indels 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95 GLGKHNYCRNPDN-RRRPWCYVQVGLKPLV--QECMVHDCAD 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       419 GL-EMNYCRNPDNDQRGPWCFT---TDPSVRWEYCNLKRCSE 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLASMINOGEN.
; 8C703C51410EBC9E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               452' AA
   -i- SIMILARITY: CONTAINS 5 KRINGLE DOMAINS.
EMBL, AJ242649; CAB46014.1; -.
HSSP; P00747; 1PMK.
                                                                                               Interpro; IPR001314; Chymotrypsin.
Interpro; IPR001001, Kringle.
Interpro; IPR003014; PAN.
Interpro; IPR003609; Pan app.
Interpro; IPR003869; Par app.
Interpro; IPR001386; Prothrombin.
Interpro; IPR001254; Ser_protease_Try.
Interpro; IPR001400; Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90535 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, 01-DEC-2001 (TrEMBLrel. 19, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                 Pfam; PF00051; kringle; 5.
Pfam; PF00024; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 29.0.
Best Local 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE 812 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06X060
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0200790
AC 0200790
DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE DT 01-DE D
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Gaps

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236 DETSSVPKPRDLCRDECEVLENVLCQTEYIFARSNPMILMRLKLPNCEDLPQPESPEAAN 295
                                                                                                                                                                                                                                          296 CIRIGIPMADPINKAHKCYNSTGVDYRGTVSVTKSGRQCQPWNS-----QYPHTHSFTAL 350
                                                                                                                                                   2 NELHOVP-----SNCDCLNGGTCVSNKYFS------NIHWCNC-----PKKFGGQH 41
                                                                                                                                                                                                                      C-----EIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50 CYEGNGHFYRGKASTDTMGRPCLPMNSATVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cox L.A., Jett C., Hixson J.E.; "Molecular Basis of the Apolipoprotein (a) Null Phenotype: A Splice Site Mutation is Associated with Deletion of a Single Exon in a Null
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Papio hamadryas (Hamadryas baboon).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Cercopithecidae,
                                                                               20.0%; Score 158.5; DB 11; Length 937; 29.7%; Pred. No. 1e-08; ive 14; Mismatches 51; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
-!- SIMILARITY: AB97886.1; -.
HSSP; P00747; 2PK4.
MEROPS; S01.999; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glycoprotein; Hydrolase; Kringle; Lipoprotein; Protease;
                                                 D6F2D84E67D03C69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              454 AA; 50041 MW; 974E30744C187B2F CRC64;
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01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
19.9%; Score 158; DB 6;
Best Local Similarity 39.8%; Pred. No. 5.2e-09;
Matches 35; Conservative 10; Mismatches 31
                                                                                                                                                                                                                                                                                                                                                                                                             454 AA
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InterPro; IPR0010001; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; Z.
Pfam; PF00069; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR0018; KRINGLE.
                                                                                                                                                                                                                                                                                         93 QLG--LGKHNYCRNPDNRRR-PWCY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00130; Kringle; 2.
SMART; SM00130; KR; 2.
SMART; SM00120; Tryp SPc; 1.
PROSITE; PS00021; KRINGLE 1; 2.
PROSITE; PS50040; KRINGLE 2; 2.
PROSITE; PS50130; TRYPEIN DOM; 1.
PROSITE; PS0135; TRYPEIN DOM; 1.
Nature 420:563-573(2002).
EMBL; AK046699; BAC32840.1; -.
BEBL; AK049369; BAC33714.1; -.
SEQUENCE 937 AA, 104088 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Apolipoprotein a (Fragment)
                                                                                                                     43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cercopithecinae; Papio.
NCBI_TaxID=9557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                   Similarity
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                                                                                   Query Match
Best Local
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 296 CIRIGIPMADPINKONHKCYNSTGVDYRGTVSVTKSGRQCQPWNS-----QYPHTHTFTAL 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The FANTOM Consortium, the RIKEN Genome Exploration Research Group Phase I & II Team; the RIKEN Genome Exploration Research based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573(2002).

EMBL; AK080896; BAC38068.1; -. SEQUENCE 937 AA, 104118 MM; CB440323CA66EC28 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      296 CIRIGIPMADPINKNHKCYNSTGVDYRGTVSVTKSGRQCQPWNS----QYPHTHSFTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 NELHQVP-----SNCDCLNGGTCVSNXYFS-----NIHWCNC-----PKKFGGQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C-----EIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL
                                                   C-----EIDKSKTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37; Gaps
                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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                                                                                                                                                                                                                                                                 01-WAR-2003 (TrEMBLrel. 23, Created)
01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
11-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Receptor tyrosine kinase-like orphan receptor 1.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2003 (TrEMBLrel. 23, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Receptor tyrosine kinase-like orphan receptor 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20.0%; Score 158.5; DB 29.7%; Pred. No. 1e-08; iive 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    937 AA.
                                                                                                                                                                                                                                      937 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=C57BL/6J, TISSUE=Adipose tissue;
MEDLINE=22354683; PubMed=12466851;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Adipose tissue;
MEDLINE=22354683; PubMed=12466851;
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                                                                                                                     QLG--LGKHNYCRNPDNRRR-PWCY 114
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Best Local Similarity 29.77
Matches 43; Conservative
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                                                                                                                                                                                                                                                         68BNP9;
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Q8BG10
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107

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48 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATV--LQQTYHAHRSDALQLGLGKHNYCRNP 105
102 CYHGDGQSYRGSFSTTVTGRTCQSWSSMTPHQHKRTPENHPNDGLTM-----NYCRNPDA 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S RQCYHGNGQSYRGTFSTTVTGRTCQSWSSMTPHRHQRTPENYPNDGLTM-----NYCRNP 63
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19.7%; Score 156; DB 4; Length 113;
Best Local Similarity 37.8%; Pred. No. 1.9e-09;
Matches 34; Conservative 12; Mismatches 32; Indels 12; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 113
113 AA; 12685 MW; F3D65681D9B5253A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 AA
                                                                                                      108 RRRPWCYVQVGLKPLV--QECMVHDCAD 133
                                                                                                                                                                  157 DTGPWCFT---MDPSVRWEYCNLTRCSD 181
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PROSITE; PS50070; KRINGLE_2; 1.
Glycoprotein; Kringle; Lipoprotein.
NON_TER
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61 KASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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100.0%; Pred. No. 2.6e-72;
tive 0; Mismatches 0;
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Matches 135; Conservative
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ORGANISM: Homo sapiens
                                                                                                                  US-09-880-503-4
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Sequence 12, Appl
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1811.566 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
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1 SNELHQVPSNCDCLNGGTCV.....QVGLKPLVQECMVHDCADGK
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1: /cgn2_6/ptodata/1/pubpaa/USO7_PUBCOWB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NTW_PUB_pep:*
3: /cgn2_6/ptodata/1/pubpaa/USO6_PUBCOMB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/USO6_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/USO6_PUBCOMB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB_pep:*
7: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
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11: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
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18: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-09-984-186-12
US-10-237-667-12
US-10-237-866-12
US-10-237-861-12
US-10-237-861-12
US-10-237-87-12
US-10-237-67-12
US-10-137-624-12
US-09-880-503-8
US-09-880-503-8
US-09-880-503-8
US-09-880-503-8
US-09-880-503-8
US-09-880-503-8
US-10-131-985-21
US-10-076-421-2
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                                                                                                                                                                                                                                             684280 segs, 185983659 residues
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                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                          - protein search, using sw model
                                                                                                                                                                                                                Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                      length: 0
length: 2000000000
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Maximum DB seq
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                                                                                                                                                                                                                                                                         Total number
                                                          OM protein
                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                             Searched:
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                                                                                       on:
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No.
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9

Gaps

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Length 135; Indels

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Sequence 4, Application US/09880503

Sequence 4, Application US/09880503

Patent No. US20020131964A1

Fatent No. US20020131964A1

GENERAL INFORMATION:

APPLICANT: CINES, Douglas B

APPLICANT: CINES, Douglas B

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND

TITLE OF INVENTION: TISSUE CONTRACTABILITY

FILE REFERENCE: 9596-331

CURRENT APPLICATION NUMBER: US/09/880,503

CURRENT PILING DATE: 2001-06-13

FRIOR FILING DATE: 2000-06-20

NUMBER OF SEQ ID NOS: 18

SEQ ID NO 4

ENGRY 135

LENGTH: 135
                                                                                                                                               Sequence 145, Applisequence 6, Applisequence 5, Applisequence 7, Applisequence 17, Applisequence 18, Applisequence 18, Applisequence 3, Applisequence 32, Applisequence 32, Applisequence 31, Applisequence 31, Applisequence 31, Applisequence 31, Applisequence 31, Applisequence 31, Applisequence 10, Applisequence 10, Applisequence 10, Applisequence 10, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Applisequence 11, Ap
                                                                               Sequence 9, Appli
Sequence 18, Appl
Sequence 19, Appl
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                    10, Appl
11, Appl
8, Appli
                                  Sequence Sequence Sequence
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S US-10-171-311-184
US-10-193-656-4
US-10-247-671-149
US-10-247-671-149
US-10-247-671-149
US-10-880-503-1
US-09-880-503-9
US-09-880-503-9
US-09-987-455-19
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US-09-987-455-19
US-09-987-455-19
US-09-987-455-11
US-09-987-455-11
US-09-987-455-11
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Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Jung, Gerard
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG
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Pred. No. 2.6e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: Macinicsh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,667
FILLING DATE: 10-56P-2002
CLASSIFICATION: CURROWN>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
RESULT 3
US-10-237-667-12
; Sequence 12, Application US/10237667
; Publication No. US20030022308A1
; GENERAL INFORMATION:
 APPLICANT: Fleer, Reinhard
 Fournier, Alain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (610) 454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 793; DB 10;
100.0%; Pred. No. 2.6e-72;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUICATION INFORMATION:
TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/984,186
FILING DATE: 29-Oct-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-09-984-186-12
                                                                                                                                                              Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
                                                                          Sequence 12, Application US/09981186; Patent No. US20020151011A1
GENERAL INFORMATION: APPLICANT: Fleer, Reinhard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 19426
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 135; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                       TITLE OF
                                      RESULT 2
US-09-984-186-12
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Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PARMACEUTICAL COMPOSITION
                                                                                                                                                                                                                         CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                              COUNTER READABLE FORM:

MEDIUM TYRE: RIOPPY disk
COMPUTER: Ploppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,866
FILING DATE: 10-Sep-2002
CLASSIPPICATION CURRENS: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 23-JAN-1997
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN-1993
                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
RADGE RADGE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
Sequence 12, Application US/10237866
Publication No. US20030036171A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 138 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
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Best Local Similarity 100.
Matches 135; Conservative
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
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                                                                                   APPLICANT: Fleer, Reinhard

AppLICANT: Fleer, Alain
Guitton, Jean-Dominique
Guitton, Jear-Dominique
Jung, Gerard
Xeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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llarity 100.0%; Pred. No. 2.6e-72;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-UL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 31-JAN-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                               ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,708
FILING DATE: 10-Sep-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO: 12: US-10-237-708-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (610) 454-3839
                    Sequence 12, Application US/10237708 Publication No. US20030036170A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (6.10) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 36
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                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
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Best Local Similarity
Matches 135; Conserv
    US-10-237-708-12
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61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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100.0%; Pred. No. 2.6e-72;
tive 0; Mismatches 0;
                                             REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUTCATION INFORMATION:
TELEPHONE: (610) 454-3839
TELEPRAX: (610) 454-3808
                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-866-12
NAME: Smith Ph.D., Julie K. REGISTRATION NUMBER: P-38,619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 12, Application US/10237871
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US-10-237-871-12
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RESULT 5 US-10-237-866-12

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124
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                                                                                                                                                  TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Macintosh
CURRENT APPLICATION DATA:
RAPLICATION NUMBER: US/10/237,871
FILING DATE: 10-Sep-2002
CLASSIFICATION: UNKNOWN-
PRIOR APPLICATION: UNKNOWN-
PILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: PR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: SMITCH Ph. D., Julie K.
REGISTRATION NUMBER: P-18,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
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MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-871-12
Publication No. US20030036172A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Parrice
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US-10-237-624-12
'Sequence 12, Application US/10237624
'Publication No. US20030082747A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (610) 454-383
TELEFAX: (610) 454-3808
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TYPE: amino acid
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Matches 13
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TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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100.0%; Pred. No. 2.6e-72;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRICATION NUMBER: 05/10/23/021
FILING DATE: 10-26p-2002
CLASSIFICATION: «Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: ST92006-US
                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,624
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-10-237-624-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 138 amino acids
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                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (610) 45
INFORMATION FOR SEQ ID NO:
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Best Local Similarity 100.
Matches 135; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
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US-09-880-503-8
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APPLICANT: CINES, Douglas B
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880, S03
CURRENT FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
NUMBER OF SEC ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEC ID NO 3.
                                                                                   Sequence 6, Application US/09880503

Patent No. US20020131964A1

GENERAL INFORMATION:
APPLICANT: CINES, Douglas B

APPLICANT: HIGAZI, Abd Al-Roof

TITLE OF INVENTION: TISSUE CONTRACTABILITY

TITLE OF INVENTION: TISSUE CONTRACTABILITY

FILE REFERENCE: 9596-331

CURRENT APPLICATION NUMBER: US/09/880,503

CURRENT FILING DATE: 2001-06-13

PRIOR APPLICATION NUMBER: US 60/212,847

PRIOR PLICATION NUMBER: US 60/212,847

NUMBER OF SEQ ID NOS: 18

SOFTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 793; DB 10; Best Local Similarity 100.0%; Pred. No. 8.3e-72; Matches 135; Conservative 0; Mismatches 0;
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100.0%; Score 793; D.
Best Local Similarity 100.0%; Pred. No. 8.5
Matches 135; Conservative 0; Mismatches
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ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 403
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TYPE: PRT
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US-09-880-503-3
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Publication No. US20030109690A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
FILE REPERENCE: PAOGED:
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
FRIOR PAPLICATION NUMBER: US 60/157,137
FRIOR APPLICATION NUMBER: US 60/157,137
FRIOR APPLICATION NUMBER: US 60/157,137
FRIOR APPLICATION NUMBER: US 60/153,280
FRIOR APPLICATION NUMBER: US 60/153,280
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FRIOR APPLICATION NUMBER: US 60/153,280
FRIOR APPLICATION NUMBER: US 60/153,280
FRIOR APPLICATION NUMBER: US 60/153,280
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR PILING DATE: 2000-06-20
PRIOR FILING DATE: 2000-06-20
SOFTWARE: PATENTIN OF: 2.1
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Matches 135; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-503-8
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Best Local Similarity
Matches 135; Conserv
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US-10-106-698-6266
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APPLICANT: BURGAT, LAWWERDER J.

TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERARY OF COLON CANCER
FILE REFERENCE: MPM01-029P2RNM
TITLE OF INVENTION: THERARY OF COLON CANCER
FILE REFERENCE: MPM01-029P2RNM
CURRENT APPLICATION NUMBER: US 10/339,971
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-12-10
PRIOR FILING DATE: 2001-03-05
PRIOR FILING DATE: 2002-03-05
PRIOR FILING DATE: 202-05-20
PRIOR FILING DATE: 202-05-20
PRIOR FILING DATE: 202-05-20
PRIOR SEQ ID NOS: 228
SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 12; Length 431;
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Sequence 21, Application US/10131985
Sequence 21, Application US/10131985
Septicant Norwarion:
Septicant Davies, Michael J
APPLICANT: Davies, Michael J
APPLICANT: Fish, Paul V
APPLICANT: Huggins, Jonathan P
APPLICANT: McIntosh, Fraser S
APPLICANT: Occleston, Nicholas L
TITLE REFERENCE: PCS 10391A
CURRENT APPLICATION NUMBER: US/10/131,985
CURRENT FILING DATE: 2002-04-25
FRIOR APPLICATION NUMBER: US/99/726,295
FRIOR FILING DATE: 1999-12-29
NUMBER OF SEQ ID NOS: 60
SOFTWARE: PATCHIN OFF: 2.1
  Thibodeau, Stephen N.
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ORGANISM: Homo sapiens
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CORGANISM: Homo Sapiens
US-10-301-822-161
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Best Local Similarity
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61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                                                                                                                                                                                                                                                  APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Wienaber, Vicki L.
APPLICANT: Henkin, Jack
APPLICANT: Severin, Jack
APPLICANT: Severin, Jean M.
APPLICANT: Severin, Jean M.
APPLICANT: Jean M.
APPLICANT: Jean M.
APPLICANT: Holzman, Thomas F.
TITLE OF INVENTION: HIGHLY CRYSTALLINE URCKINASE
FILE REPERENCE: 6310.US.Pl
CURRENT APPLICATION NUMBER: US/09/264,468B
CURRENT FILING DATE: 1999-03-05
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO. 1
LENGTH: 431
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Publication No. US20030148410A1
GENERAL INFORMATION:
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Berger, Allison
APPLICANT: Guillemette, Tracy L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (1)...(20)
OTHER INFORMATION: Leader sequence
NAME/KEY: VARIANT
CCATION: (279)...(279)
OTHER INFORMATION: Xaa = any amino acid
NAME/KEY: VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LOCATION: (302)...(302); OTHER INFORMATION: Xaa = any amino acid US-09-264-468B-1
                                                                                                                                                                                                                                         Sequence 1, Application US/09264468B
Patent No. US20020106775A1
GENERAL INFORMATION:
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Guillemette, Tracy L.
Kamatkar, Shubhangi
Schlegel, Robert
Monahan, John E.
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                                                           121 PLVQECMVHDCADGK 135
                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
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US-10-301-822-161
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81 KASTDTWGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
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GENERAL INFORMATION:
APPLICANT: NY, TOT
TITLE OF INVENTION:
TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS; FILE REFERENCE: 3810/14577-US3; CURRENT APPLICATION NUMBER: US/10/193,656; CURRENT APPLICATION NUMBER: US 60/304,461; PRIOR APPLICATION NUMBER: US 60/304,461; PRIOR FILING DATE: 2001-07-10; PRIOR APPLICATION NUMBER: US 60/304,490; PRIOR RILING DATE: 2001-07-10; PRIOR APPLICATION NUMBER: US 60/304,490; PRIOR RILING DATE: 2001-07-10; PRIOR APPLICATION NUMBER: US 60/305,182; PRIOR FILING DATE: 2001-07-13; NUMBER: OF SEQ ID NOS: 18
SEQ ID NO 4
SEQ ID NO 4
LENGHARE: PATENTING OF 18
                                                                                                                                                                                                                                                                   100.0%; Score 793; DB 15;
100.0%; Pred. No. 9e-72;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: GenBank / P00749
DATABASE ENTRY DATE: 1988-07-21
RELEVANT RESIDUES: (1)..(431)
PRIOR APPLICATION NUMBER: US 60/335,936
PRIOR FILING DATE: 2001-11-14
NUMBER OF SEQ ID NOS: 238
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 184
LENGTH: 431
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Best Local Similarity 100.(
Matches 135; Conservative
                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
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US-10-193-656-4
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APPLICANT: Chen, Yan
APPLICANT: Chen, Xumei
APPLICANT: Chen, Xumei
APPLICANT: Romarkar, Shubhangi
APPLICANT: Ramarkar, Shubhangi
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Gannavarapu, Manjula
APPLICANT: Hoersh, Sebastian
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: OF CERVICAL CANCER
FILE REFERENCE: MRI-035
CURRENT APPLICATION NUMBER: US/10/171,311
CURRENT FILING DATE: 2001-06-13
PRIOR PILING DATE: 2001-06-13
PRIOR FILING DATE: 2001-06-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                              81 XASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 140
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                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: WADA, MANABU
APPLICANT: WADA, MANABU
TITLE OF INVENTION: ANTI-HIV AGENTS
FILE REFERENCE: HAYAK-9
CURRENT APPLICATION NUMBER: US/10/076,421
CURRENT APPLICATION NUMBER: US-02-05-17
PRIOR PILING DATE: 2002-05-17
PRIOR PILING DATE: 2001-02-20
PRIOR PILING DATE: 2001-06-19
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PATENT NOS: 5
SOFTWARE: PATENT NOS: 2.1
SENGTH: 431
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Publication No. US20030087270A1
GENERAL INFORMATION:
APPLICANT: Schlegel, Robert
APPLICANT: Chen, Yan
                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/10076421
Publication No. US20020193304A1
GENERAL INFORMATION:
                                                                                                                                                                     141 PLVQECMVHDCADGK 155
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CORGANISM: Homo sapiens
US-10-076-421-2
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Best Local Similarity
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US-10-171-311-184
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US-10-076-421-2
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US-09-880-503-9
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Sequence 2, Application US/10407821

publication No. US2003021938641

GENERAL INFORMATION:
APPLICANT: IDELL, STEVEN

TITLE OF INVENTION: TO TS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL

TITLE OF INVENTION: TO TS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL

TITLE OF INVENTION: TO TS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL

TITLE OF INVENTION: ADHESIONS IN TETRACYCLINE-INDUCED PLEURITIS IN RABBITS

FILE REPERENCE: UTSN:0220S

CURRENT FILING DATE: 2003-04-04

PRIOR PLICATION NUMBER: 60/414,202

PRIOR PLICATION NUMBER: 60/370,466

PRIOR FILING DATE: 2002-04-05

NUMBER OF SEQ ID NOS: 3

SOFTWARE: Patentin Ver: 2.1

SEQ ID NO 2

LENGTH: 411

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                      Sequence 149, Application US/10247671

Sequence 149, Application US/10247671

Publication No. US2030194721A1

GENERAL INFORMATION: DECOURSE SEPECTORY

APPLICANT: Mixtra, Thomas

APPLICANT: Shiffman, Dov

APPLICANT: Porter, Gordon, J.

TITLE OF INVENTION: GENES EXPRESSED IN TREATED FOAM CELLS

FILE REFREENCE: PA-0050 US

CURRENT APPLICATION NUMBER: US/10/247,671

CURRENT APPLICATION NUMBER: US/10/247,671

CURRENT PILING DATE: 2001-09-19

PRIOR FILING DATE: 2001-09-19

NUMBER OF SEQ ID NOS: 186

SEQ ID NO 149

LENGTH: 431

LENGTH: 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20030194721A1 1453334CD1
US-10-247-671-149
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Pred. No. 1.4e-71;
1; Mismatches 0;
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Matches 134; Conservative
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Best Local Similarity
RESULT 18
US-10-247-671-149
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Sequence 9, Application US/09880503

Sequence 9, Application US/09880503

Sequence 9, Application US/09880503

Sequence 9, Application US/09880503

Sequence 9, Application US/09880503

APPLICANT: CINES, Douglas B

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND TITLE OF INVENTION: TISSUE CONTRACTABILITY

TITLE OF INVENTION: TISSUE CONTRACTABILITY

FILE REFERENCE: 9596-331

CURRENT FILING DATE: 2001-06-13

PRIOR FILING DATE: 2001-06-13

PRIOR FILING DATE: 2000-06-20

NUMBER OF SEQ ID NOS: 18

SOFTWARE: Patentin Ver. 2.1

SEQUENCE: Patentin Ver. 2.1
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APPLICANT: CITES, Douglas B
APPLICANT: CITES, DAG Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR FILING DATE: 2000-06-20
                                                                                                                                    61 KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGKGKHNYCRNPDNRRRPWCYVQVGLK 120
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                                                                                       61 KASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLK 120
1 SNELHQVPSNCDCLNGGTCVSNKYPSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFYRG 60
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64.3%; Score 510; DB 10;
Best Local Similarity 100.0%; Pred. No. 5.7e-44;
Matches 88; Conservative 0; Mismatches 0;
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SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
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US-09-880-503-1
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Best Local Similarity
Matches 88; Conserv
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US-09-969-271-7
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; Sequence 10, Application US/09987457
; Publication No. US20030013150A1
; GENERAL INPORMATION:
    APPLICANT: Manosroi, Jiradya
    APPLICANT: Tayapiwatana, Chatchai
    APPLICANT: Tayapiwatana, Chatchai
    APPLICANT: Werner, Rolf-Gunther;
    APPLICANT: Werner, Rolf-Gunther;
    APPLICANT: OGetz, Friedrich
    APPLICANT: Werner, Rolf-Gunther;
    APPLICANT: OGetz, Friedrich
    APPLICANT: Werner, 100-10-10-14
    FILE REFERENCE: 0652_218001
    CURRENT APPLICATION NUMBER: 06/268,573
    PRIOR APPLICATION NUMBER: 60/268,573
    PRIOR APPLICATION NUMBER: GB 00 27 782.2
    PRIOR PILING DATE: 2000-01-14
    NUMBER OF SEQ ID NOS: 18
    SOFTWARE: PatentIn Ver: 2.1
    SEQ ID NO 18

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                    1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKGKHNYCRNPDN 60
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Fublication No. US20030049729A1
Fublication No. US20030049729A1
GENERAL INFORMATION:
APPLICANT: Aranya Manosroi
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Friedrich Goetz
APPLICANT: Rolf-Guenther Werner
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: DNA-Derived tPA or K2S Molecules
TITLE OF INVENTION: DNA-Derived tPA or K2S Molecules
TITLE OF ILING DATE: 20001-11-14
CURRENT FILING DATE: 2001-11-14
FRIOR FILING DATE: 2001-02-15
FRIOR FILING DATE: 2000-12-15
FRIOR FILING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 25
SOFTWARE: PatentIn Ver. 2.1
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                                                                                                108 RRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                                                                                             61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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161 GKYSSEFCSTPACSEG 176
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ORGANISM: Homo sapiens (tPA)
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Sequence 7, Application US/09969271
Sequence 7, Application US/09969271
Sequence 7, Application US/09969271
SEQUENCE 10: US20020098179A1
SEQUENCE 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: Sequence 1: S
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Patent No. US20020156263A1
GENERAL INCRNATION:
APPLICANT: Chen, Huei-Mei
TITLE OF INVENTION: GENES EXPRESSED IN BREAST CANCER
FILE REPERBUGE: PA.0037 P
CURRENT APPLICATION NUMBER: US/09/974,298
CURRENT FILING DATE: 2001-10-04
PRIOR FILING DATE: 2000-05-10
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41.4%; Score 328.5; DB 13
Best Local Similarity 46.3%; Pred. No. 6.7e-25;
Matches 63; Conservative 14; Mismatches 54.
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196 GKYSSEFCSTPACSEG 211
; SEQ ID NO 19; LENGTH: 527; TYPE: PRT; TYPE: PRT; ORGANISM: Homo sapiens US-09-987-455-19
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US-09-969-271-7
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US-09-974-298-145
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STATE: DC
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LENGTH: 562
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/10443701

| Sequence 4, Application US/10443701
| General INFORMATION:
| General INFORMATION:
| APPLICATION NUMBER: US/10/443,701
| CURRENT PILING DATE: 2003-05-21
| PRIOR APPLICATION NUMBER: US/09/703,695
| PRIOR APPLICATION NUMBER: US/09/703,695
| PRIOR PILING DATE: 2000-11-01
| PRIOR PILING DATE: 1999-11-04
| NUMBER OF SEQ ID NOS: 4
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                                                                                                                ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020156263A1 1001470CD1
US-09-974-298-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41.4%; Score 328.5; DB 12; Length 46.3%; Pred. No. 7.2e-25; Live 14; Mismatches 54; Indels
                                                                                                                                                                                       Query Match
41.4%; Score 328.5; DB 10; Length
Best Local Similarity 46.3%; Pred. No. 7.2e-25;
Matches 63; Conservative 14; Mismatches 54; Indels
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196 GKYSSEFCSTPACSEG 211
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APPLICANT: HOLMDAHL, Rikard
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NUMBER OF SEQ ID NOS: 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 562
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                    ORGANISM: Homo sapiens
              SOFTWARE: PERL Program
SEQ ID NO 145
LENGTH: 562
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US-10-443-701-4
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                                                                     TYPE: PRT
                                                                                                        FEATURE
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59 RGKASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVG 118
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TITLE OF INVENTION: CYCLIC PEPTIDES THAT BIND TO
UROKINASE-TYPE PLASMINOGEN ACTIVATOR RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 ELHQVP-SNCD---CLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNGHFY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 41.4%; Score 328.5; DB 15; Length 562; l Similarity 46.3%; Pred. No. 7.2e-25; 63; Conservative 14; Mismatches 54; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version #1.30
APPLICANT: LI, Jinan
TITIE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
FILE REPERENCE: 3810/1J577-US3
CURRENT APPLICATION NUMBER: US/10/193,656
CURRENT FILING DATE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR FILING DATE: 2001-07-10
PRIOR FILING DATE: 2001-07-10
PRIOR FILING DATE: 2001-07-10
PRIOR FILING DATE: 2001-07-10
PRIOR FILING DATE: 2001-07-13
PRIOR FILING DATE: 2001-07-13
NUMBER OF SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: RADER, FISHMAN & GRAUER
STREET: 1233 20TH STREET NW, SUITE 501
CITY: WASHINGTON
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FILING DATE: 22-Jan-2003
CLASSIFICATION: «Unknown»
PRIOR APPLICATION AUTR:
APPLICATION NUMBER: US/09/285,783
FILING DATE: 05-Apr-1999
ATTORNEY/AGENT INFORMATION:
NAME: LIVNAT, SHWUEL
REGISTRATION NUMBER: 33,949
                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: GenBank / P00750
DATABASE ENTRY DATE: 1986-07-21
RELEVANT RESIDUES: (1)..(562)
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATCALIN Release #1.0,
CURRENT APPLICATION DATA:
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Publication No. US20030166514A1
GENERAL INFORMATION:
APPLICANT: Jones, Terence R.
Haney, David N.
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196 GKYSSEFCSTPACSEG 211
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sequence 7, Application US/09880503
Factor No. US20020131964A1
Factor No. US20020131964A1
GENERAL INFORMATION:
APPLICANT: CINES, Douglas B
APPLICANT: CINES, Douglas B
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REPERENCE: 9566-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT APPLICATION NUMBER: US 60/212,847
FRIOR FILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SEQ ID NO 7
LENGTH: 323
LENGTH: 323
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Sequence 2, Application US/09880503

Patent No. US20020131964A1

GENERAL INFORMATION:

APPLICANT: HIGAZI, Abd Al-Roof

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND

TITLE OF INVENTION: TISSUE CONTRACTABILITY

FILE REFERENCE: 9596-331

CURRENT APPLICATION NUMBER: US 60/212,847

FRIOR FILING DATE: 2000-06-20

RACOR APPLICATION NUMBER: US 60/212,847

FRIOR FILING DATE: 2000-06-20

NUMBER OF SEQ ID NOS: 18

SEQ ID NO 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 SNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSK 48
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                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 36.9%; Score 293; DB 12; Length 49; Best Local Similarity 100.0%; Pred. No. 2e-22; Matches 49; Conservative 0; Mismatches 0; Indels
REFERENCE/DOCKET NUMBER: ANG-001/DIV (80144-0007)
TELEPHONE: (202) 955-9787
TELEPHONE: (202) 955-3751
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 49 amino acids
TYPE: amino acids
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                 LOCATION: Group(11..19, 13..31, 33..42); sequence description: SEQ ID NO: 5: US-10-349-543-5
                                                                                                                                                                                                                                           TOPOLOGY: linear
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ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                    FEATURE
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US-09-880-503-2
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US-09-880-503-7
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Sequence 12, Application US/08797689
; Batent No. 5876969
; CENERAL INFORMATION:
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                                                 Sequence 43, Appl
Sequence 50, Appl
Sequence 38, Appl
Patent No. 5185259
Patent No. 5344773
Sequence 49, Appl
Sequence 51, Appl
Sequence 57, Appl
Sequence 57, Appl
Sequence 67, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 63, Appl
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US-08-811-949-49
US-08-811-949-55
US-08-811-949-57
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US-08-811-949-57
US-08-811-949-57
US-09-553-498-10
US-09-553-498-10
US-09-811-949-63
US-09-811-947-3
                                                    US-08-811-949-43
US-08-560-098A-50
US-08-883-795A-38
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FLING DATE: 31-JAN-1997
CLASSIFICATION: 31-JAN-1997
FLING DATE: 21-JAN-1997
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 28-JAN-1992
PRIOR APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN-1993
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,6199
PREPERMENT NUMBER: P-38,6199
PREPERMENT NUMBER: P-38,6199
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5200340-2
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TELEPAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
TYPE: amino acids
TOPOLOGY: linear

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88, Appl
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44, Appl
24, Appl
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118, Appl
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3, Appl
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                                                                                                                                                                                              2003, 14:35:43 ; Search time 4.55172 Seconds (without alignments) 818.010 Million cell updates/sec
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Patent No. 518
Sequence 47,
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510
1 KTCYEGNGHFYRGKASTDIM.....QVGLKPLVQECMVHDCADGK 88
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Sequence 73
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Sequence 3
Patent No.
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/ggn2 6/ptodata/1/iaa/5B_COMB.pep:*
/ggn2 6/ptodata/1/iaa/6A COWB.pep:*
/ggn2 6/ptodata/1/iaa/6B_COMB.pep:*
/ggn2 6/ptodata/1/iaa/PerUS COMB.pep:*
/ggn2 6/ptodata/1/iaa/PerUS COMB.pep:*
                        GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd.
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US-09-101-272G-73
US-08-1010-272G-98
US-08-091-741-63
US-08-567-098A-44
US-08-567-098A-44
US-08-967-024C-25
US-08-967-024C-25
US-08-967-024C-25
US-08-153-799-18
US-08-153-799-18
US-09-101-272G-10
US-09-101-272G-96
US-09-101-272G-96
US-09-101-272G-96
US-09-101-272G-96
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PCT-US91-01025A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328717 segs, 42310858 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                             - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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length: 2000000000
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                                                                                                                                             OM protein
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109 RRRPWCYVQVGLKPLVQECMVHDCADGK 136
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APPLICATION NUMBER: DE P43 23 754.1
APLICADION NUMBER: DE P43 23 754.1
FILING DATE: 15-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 148/41345
TELECHONE: (202)628-8800
                                                                                                                                                                           61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                               ; Sequence 83, Application US/08093741; Patent No. 5681721; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: STEFFENS, GERD J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88; Conservative
            Query Match
Best Local Similarity 100.
Matches 88; Conservative
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Matches 88; Conserv
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US-08-093-741-83
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                                                                                                                                                                         51 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 110
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                                                                                                                                     1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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                                                         Length 138;
                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Missin Food Products Co., Ltd., TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR; TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR; FILE REFERENCE: 050979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT FILING DATE: 1996-07-08
PRIOR APPLICATION NUMBER: JP 1059/1996
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107
SEQ ID NO 73
SEQ ID NO 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 98, Application US/09101272G
Patent No. 6503445
GENERAL INFORMATION:
APPLICANT: Nissin Food Products Co., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
FILE REPRENCE: 050979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT FILING DATE: 1998-07-08
PRIOR FILING DATE: 1996-01-08
                                                     Query Match
Best Local Similarity 100.0%; Pred. No. 8.5e-54;
Matches 88; Conservative 0; Mismatches 0;
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COTHER INFORMATION: ATFHI-ML chimeric protein US-09-101-272G-98
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                                                                                                                                                                                                                                             61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; FEATURE:
, NAME/KEY: misc_feature
; OTHER INFORMATION: ATF domain of uPA
US-09-101-272G-73
                                                                                                                                                                                                                                                                                                                   RESULT 2
US-09-101-272G-73
Sequence 73, Application US/09101272G
Patent No. 6509445
GENERAL INFORMATION:
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SOFTWARE: Patentin version 3.1
SEQ ID NO 98
LEGITH: 208
TYPE: PRT
ORGANISM: Artificial Sequence
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Matches 88; Conservative
MOLECULE TYPE: protein
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TYPE: PRT
ORGANISM: Homo sapiens
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    ; MOLECOLD ...
US-08-797-689-12
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49 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQQTYHAHRSDALQLGLGKHNYCRNPDN 108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: WIENDY, STEPHAN
APPLICANT: SCHWEIDER, JOHANNES
APPLICANT: SCHWEIDER, JOHANNES
APPLICANT: SCHWEIDER, JOHANNES
APPLICANT: HEINZEL-WIELAND, REGINA
APPLICANT: HINZEL-WIELAND, BEFUNCTIONAL UROKINASE VARIANTS WITH
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
TITLE OF INVENTION: INHIBITING EFFECT
NUMBER OF SEQUENCES: 83
CORRESPONDENCE ADDRESS:
                                                                                                         1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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100.0%; Score 510; DB 4; Length 208; 100.0%; Pred. No. 1.4e-53; tive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEEE: LorabsE: McKeown, Edwards & Lenahan 1200 G Street, N. W. Suite 700 Y: U.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/093,741
FILING DATE: O-JUL-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 510; DB 1;
100.0%; Pred. No. 2.7e-53;
ive 0; Mismatches 0;
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88; Conservative
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
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Best Local Similarity
                                                                                     20002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-560-098A-44
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                               APPLICANT: STEFFENS, GERD J.
APPLICANT: STEFFENS, GERD J.
APPLICANT: SCHNEIDER, JOHANNES
APPLICANT: HERINZEL-WIELAND, REGINA
APPLICANT: HERINZEL-WIELAND, REGINA
APPLICANT: SAUNDERS, INFROVED DEREK J.
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
TITLE OF INVENTION: IMPROVED FIBRINOLYTIC CHARACTERISTICS AND THROMBIN
UNDER OF SEQUENCES: 83
ADDRESS: ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
ITTLE OF INVENTION: Proteins having Fibrinolytic and
ITTLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                      STREET: Evenance: McKeown, Edwards & Lenahan STREET: 1200 G Street, N. W. Suite 700 CITY: Washington, D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA.

CURRENT APPLICATION DATA.

APPLICATION NUMBER: US/08/720,012

FILING DATE: 27-SEP-1996

CLASSIFICATION: 435

PRIOR APPLICATION DATA.

APPLICATION NUMBER: US 08/093,741

FILING DATE: 20-JUL-1993

APPLICATION NUMBER: DE P43 23 754.1

FILING DATE: 15-JUL-1993

ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.

REGISTRATION NUMBER: 26,269

REGISTRATION NUMBER: 26,269

REGISTRATION NUMBER: 26,269

TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800

TELEPHONE: (202) 628-8804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 RRRPWCYVQVGLKPLVQECMVHDCADGK 89
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                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
US-08-560-038A-44
Sequence 44, Application US/08560098A
Parent No. 5976841
GENERAL INFORMATION:
              Sequence 83, Application US/08720012
Patent No. 5747291
GENERAL INFORMATION:
APPLICANT: TEFFENS, GERD J.
APPLICANT: WNENDT, STEPHAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 83: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 365 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.
Matches 88; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-720-012-83
US-08-720-012-83
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STREET: 1200 G Street, N.W., Suite 700

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STREET: 1200 G Street, N.W., Suite 700

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STREET: 1200 G Street, N.W., Suite 700

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48 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                           1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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10.0%; Score 510; DB 1; Length 411;
10.0%; Pred. No. 3.1e-53;
88; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                         0; Gaps
Query Match 100.0%; Score 510; DB 3; Length 393; Best Local Similarity 100.0%; Pred. No. 2.9e-53; Matches 88; Conservative 0; Mismatches 0; Indels (
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48 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYFAHRSDALQLGLGKHNYCRNPDN 107
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7.05-08-286-748B-18
7.5Sequence 18, Application US/08286748B
7.Parent No. 5759542
7.DEGENERAL INFORMATION:
APPLICANT: Victor Gurewich
7.TILE OF INVENTION: OP DRUGS BY PLATELETS FOR THE DELIVERY
7.TILE OF INVENTION: CARDIOVASCULAR AND OTHER DISEASES
NUMBER OF SEQUENCES: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 510; DB 1; Length 411; 100.0%; Pred. No. 3.1e-53; Live 0; Mismatches 0; Indels
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Fatent No. 5766883
GENERAL INFORMATION:
APPLICANT: Ballance, David J
APPLICANT: Goodey, Andrew R
TITLE OF INVENTION: Polypeptides
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: R Hain Swope, BOC Health Care Inc
STREET: 100 Mountain Avenue
                                                                                                                                                                                                                                                                                              COUNTRY: Massachusetts
COUNTRY: U.S.A.
ZIF: 02110-2804
COMPUTER: U.S.A.
COMPUTER: SEADABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 502 or 553X
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/286,748B
FILING DATE: August 5, 1994
CLASSIFICATION 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: TILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: J. Peter Fasse
NAME: J. Peter Fasse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            108 RRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 04547/013001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity luv...
Best Local 88; Conservative
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TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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New Jersey
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STREET: Zerray: Boston
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STRANDEDNESS:
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COUNTRY:
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48 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 107
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100.0%; Score 510; DB 1; Length 411;
Best Local Similarity 100.0%; Pred. No. 3.1e-53;
Matches 88; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/07942157A
Patent No. 5648253
GENERAL INFORMATION:
APPLICANT: Wei, Cha-Mer
TITLE OF INVENTION: Inhibitor-Resistant Urokinase
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Kilpatrick & Cody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/942,157A
                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/153,799
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1100 Peachtree Street Suite 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108 RRRPWCYVQVGLKPLVQECMVHDCADGK 135
                                                                                                                                                                                                 CLASSIFICATION: 435
REIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847975
FILING DATE: 06-MAR-1992
REIOR APPLICATION NUMBER: US 8909916.2
REIOR APPLICATION NUMBER: 29-APR-1989
RIOR APPLICATION NUMBER: 27-APR-1989
REIOR APPLICATION NUMBER: PCT/GB90/00650
FILING DATE: 26-APR-1990
REIOR APPLICATION NUMBER: US 07/775952
REILING DATE: 26-APR-1990
REILING DATE: 29-CCT-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RRRPWCYVQVGLKPLVQECMVHDCADGK
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Swope, R Hain
REGISTRATION NUMBER: 24864
REFREENCE/DOCKET NUMBER: 92H8
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 665 2400
TELEFAX: (908) 771 6159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: 219484
INFORMATION FOR SEQ ID NO: 18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 411 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS LENGTH: 411 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) TOPOLOGY: linear
) MOLECULE TYPE: protein
US-08-153-799-18
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CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Georgia
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US-07-942-157A-3
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LENGTH: 431
                      RESULT 14
US-09-101-272G-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= modified
/note= "six amino acids deleted in mutant"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 3.3e-53;
Matches 88; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: PROTEASE RESISTANT URCKINASE NUMBER OF SEQUENCES: 6
CURRENT APPLICATION: DATA:
APPLICATION UNMER: US/07/766,858
FILING DATE: 16-AUG-1985
PRIOR APPLICATION DATA:
APPLICATION UNMER: 725,468
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RRRPWCYVQVGLKPLVQECMVHDCADGK 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 RRRPWCYVQVGLKPLVQECMVHDCADGK 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Peptide
LOCATION: 1..19
CTHEN INFORMATION: /label= peptide
OTHEN INFORMATION: /note= "WAP signal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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FILING DATE:
CLASSIFICATION: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/631673
FILING DATE: 20-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: PABSE, PALYER L.
REGISTRATION NUMBER: 31,284
REFERENCE/POCKET NUMBER: TS1108COT
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF TELEFONE: (404)815-6508
INFORMATICAL (404)815-6508
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CTHER INFORMATION:
CTHER INFORMATION:
US-07-942-157A-3
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Best Local Similarity
Matches 88; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 430
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5219569-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 127
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                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: mat_peptide
| LOCATION: (21)...()
| CTHER INFORMATION:
| NAME/KEY: m.isc_feature
| LOCATION: (20)...()
| COCATION: (20)...()
| UCCATION: Urokinase-type plasminogen activator (uPA)
| US-09-101-2726-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5188829-1

;Patent No. 5188829

; APPLICANT: KOBAYASHI, YO-ICHI;OMORI, MUNEKI;YAMADA, CHIKAKO

; TITLE OF INVENTION: RAPIDLY ACTING PROUROKINASE

; CURRENT APPLICATION DATA:

; CURRENT APPLICATION DATA:

; FILING DATE: 18-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                GENERAL INFORMATION:
APPLICANT: NISSIN POOD PRODUCTS CO., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
FILE REFERENCE: Q50979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT PILING DATE: 1998-07-08
PRIOR PILING DATE: 1996-01-08
PRIOR FILING DATE: 1996-11-08
NUMBER OF SEQ ID NOS: 107
SOTWARE: Patentin version 3.1
SEQ ID NO 1
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100.0%; Score 510; DB 6;
Best Local Similarity 100.0%; Pred. No. 3.3e-53;
Matches 88; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 510; DB 4;
100.0%; Pred. No. 3.3e-53;
tive 0; Mismatches 0;
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US-08-560-098A-47
; Sequence 47, Application US/08560098A
; Patent No. 5976841
; GENERAL INFORMATION:
; APPLICANT: WNENDT, Stephan
Sequence 1, Application US/09101272G; Patent No. 6509445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 88; Conservative
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ORGANISM: Homo sapiens
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Gaps

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49 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 108
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                                                                                                                                                1 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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Patent No. 6277818
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: MAZER, Andrew P.
APPLICANT: JONES, Terence R.
TITLE OF INVENTION: CYCLIC PEPTIDE LIGANDS THAT TARGET URCKINASE
TITLE OF INVENTION: PLASMINOGEN ACTIVATOR RECEPTOR
FILE REFERENCE: 329042000300 SIDN 1-7
CURRENT FILING NUMBER: US/09/181,816
CURRENT FILING DATE: 1998-10-29
NUMBER OF SEQ ID NOS: 7
                                  Score 505; DB 4; Length 194; Pred. No. 5.1e-53;
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Pred. No. 4.9e-52;
0; Mismatches 1; Indels
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                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 96, Application US/09101272G
; Patent No. 6509445
; GENERAL INFORMATION:
   APPLICANT: NISBAIN FOOD Products Co., Ltd.
   TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
   FILE REFERENCE: Q50979
   CURRENT APPLICATION NUMBER: US/09/101,272G
   CURRENT FILING DATE: 1998-07-08
   PRIOR PILING DATE: 1996-01-08
   NUMBER OF SEQ ID NOS: 107
   SOFTWARE: PatentIn version 3.1
   SEQ ID NO 96
   LENGTH: 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 99.0%; Score 505; DB 4; I
Best Local Similarity 100.0%; Pred. No. 5.3e-53;
Matches 87; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: ATFHI-CL chimeric protein
                                    ch 99.0%; Score 505; DB 1 Similarity 100.0%; Pred. No. 5.1 87; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                        109 RRRPWCYVQVGLKPLVQECMVHDCADG 135
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                                                                                                                                                                                                                                                      61 RRRPWCYVQVGLKPLVQECMVHDCADG 87
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11 Similarity 98.9%;
87; Conservative
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SEQ ID NO 1
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                                    Query Match
Best Local Similarity
Matches 87; Conserv
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Best Local Similarity
Matches 87; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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SOFTWARE: Petentin Release #1.0, Version #1.30 (EPO)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/560,098A

FILING DATE: 17-NOV-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: P 44 40 892.7

FILING DATE: 17-NOV-1994

ATTORNEY AGENT INFORMATION:

NAME: EVANS, JOSEPh D.

REGIGERATION NUMBER: 148/42448

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:
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APPLICANT: HEINZEL-WIELAND, Regina
APPLICANT: STEFFENS, Gerd Josef
TITLE OF INVENTION: Proceins having Fibrinolytic and
TITLE OF INVENTION: Coagulation-inhibiting Properties
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 80, Application US/09101272G
; Patent No. Application US/09101272G
; Patent No. Application US/09101272G
; Patent No. Application US/09101272G
; GENERAL INFORMATION:
APPLICANT: Nissin Food Products Co., Ltd.
TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR
FILE REFERENCE: Q50979
CURRENT FILING DATE: 1988-07-08
; CURRENT FILING DATE: 1988-07-08
; PRIOR APPLICATION NUMBER: JP 1059/1996
; PRIOR APPLICATION NUMBER: JP 1059/1996
; NUMBER OF SEQ ID NOS: 107
; SGO ID NOS 80
; LENGTH: 194
; TYPE: PRT
CORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
100.0%; Score 510; DB 2;
Best Local Similarity 100.0%; Pred. No. 3.3e-53;
Matches 88; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129 RRRPWCYVQVGLKPLVQECMVHDCADGK 156
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                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS_DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 432 amino acids
TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: protein US-08-560-098A-47
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US-09-101-272G-80
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0; Gaps

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Gaps

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TYPE: PRT ORGANISM: Homo sapiens

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TITLE OF INVENTION: CANCEROUS METASTASIS INHIBITOR FILE REPERENCE: 9050979
CURRENT APPLICATION NUMBER: US/09/101,272G
CURRENT PILING DATE: 1998-07-08
PRIOR APPLICATION NUMBER: UP 1059/1996
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 107
SEQ ID NO 62
SEQ ID NO 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97.8%; Score 499; DB 2; Length 411;
98.9%; Pred, No. 6.56-52;
trive 0; Mismatches 1; Indels 0; Gaps 0;
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                                           48 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQIYHAHRSDALQLGLGKHNYCRNPDN 107
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            1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                             20
60-098A-48
nce 48, Application US/08560098A
nt No. 5976841
IRAL INFORMATION
PPLICANT: WIRNDT, Stephan
PPLICANT: HENVEL-WIELAND, Regina
PPLICANT: STEFFENS, Gard Josef
ITLE OF INVENTION: Coagulation-inhibiting Properties
ITLE OF INVENTION: Coagulation-inhibiting Properties
ITRESEER: Express;
CORRESPONDENCE ADDRESS:
ADDRESSEE: Expreson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N.W., Suite 700
CITY: Mashington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA: Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NATA:
FILING DATE: 17-NOV-1995
APPLICATION DATA:
APPLICATION NATE: P 44 40 892.7
FILING DATE: 17-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/POCKET NUMBER: 148/42448
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEPHONE: (202) 628-8844
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108 RRRPWCYVQVGLKPLVQECMVHDWADGK 135
                                                                                                                                                       108 RRRPWCYVQVGLKLLVQECMVHDCADGK 135
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                                                                                                                     61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 411 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MINGEQUE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 98.99
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US-09-101-272G-62
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Sequence 62, Application US/091012726 Patent No. 6509445 GENERAL INFORMATION: APPLICANT: Nissin Pood Products Co., Ltd.

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RESUL: 4.2-590B-25
RESUL: 4.2-590B-25
Sequence 25, Application US/08142590B
Setent No. 6120765
GENERAL INFORMATION:
APPLICANT: HIBINO, Tashihiko; TAKAHASHI, Tadahito; HORII, Izumi; and GOETINCK,
TITLE OF INVENTION: UROKINASE PLASMINOGEN ACTIVATOR FRAGMENTS
TITLE OF SEQUENCES: 25
                                                                                                                                                                                                                                                                                                                                        1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                          6 KTCYEGNGHPYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 65
                                                                                                                                                                                                                                                       0; Gaps
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                                                                                                                                                            Query Match 95.9%; Score 489; DB 4; Length 89; Best Local Similarity 100.0%; Pred. No. 1.7e-51; Matches 84; Conservative 0; Mismatches 0; Indels
; NAME/KBY: misc feature
. OTHER INFORMATION: residues 43-131 of the ATF domain of uPA
US-09-101-2726-8
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ACTI Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/142,590B
FILING DATE: 25-OCT-1993
PRIOR APPLICATION NUMBER: US 08/042,318
FILING DATE: DS-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: Myers, Paul L.
REGISTRATION NUMBER: 35,965
REGISTRATION NUMBER: 35,965
REGISTRATION NUMBER: 35,965
REGISTRATION NUMBER: 35,766
REGISTRATION NUMBER: 35,766
REGISTRATION NUMBER: 35,77400
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF SEQ ID NO: 55:
EINGRAFICH 157 amino acids
TENDERAL ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION A
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CORRESPONDENCE ADDRESSS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRRPWCYVQVGLKPLVQBCMVHDC 84
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TOPE: amino acids
TOPOLOGY: '' '''
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Massachusetts
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Patent No. 5326700
GENERAL INFORMATION:
FILL INFORMATION:
FITLE OF INVENTION: Method for Altering Post-Translational Processing of Tissue F NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
ADDRESSEE: LIL LOTROPATE CENTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91 TCYEDQGISYRGTWSTAESGAECTNWNSSALAQKPYSGRRPDAIRLGLGNHNYCRNPDRD 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR
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APPLICANT: SAITO, YOSHIMASA
APPLICANT: SASAKI, HITOSHI
APPLICANT: HAYASHI, MASAKO
APPLICANT: HAYASHI, MASAKO
APPLICANT: NOTANI, JOUJI
APPLICANT: NOTANI, JOUJI
APPLICANT: NOTANI, MASAKAZU
TITLE OF INVENTION: TISSUE PLASMINOGEN ACTIVATOR
NUMBER OF SEQUENCES: 67
CORRESPONDENCE ADDRESS:
ADDRESSEE: P.C.
STREET: 1755 S. JEFFERSON DAVIS HIGHWAY, SUITE 400
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 527;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 226; DB 1; Length 52
Pred. No. 5.3e-19;
9; Mismatches 36; Indels
                                                                                                                                                          STREET: Lilly Corporate Center
CITY: Indianapolis
STARET: IN.
COUNTRY: U.S.A.
ZIP: 46285
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.0 Mb storage
COMPUTER: Macintosh
OPERATING SYSTEM: Macintosh
SOFTWARE: Microsoft Word
CURRENT PPLICATION NUMBER: U9/07/609,510B
FILING DATE: 19901106
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MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC compatible
OPPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 05-MAR-1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         151 SKPWCYVFKAGKYSSEFCSTPACSEG 176
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                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 19901106
CLASSIFICATION: 435
INFORMATION FOR SEQ 1D NO: 16: SEQUENCE CHARACTERISTICS:
LENGTH: 527 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 47.7%;
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 527 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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KTCYBGNGHFYRGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 510; DB 10;
100.0%; Pred. No. 3.5e-52;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Sequence 9, Application US/09880503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88; Conservative
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 88; Conserv
                                                                    RESULT 2
US-09-880-503-9
                                                                                                                                                                                                                                                                                                                                                                   JS-09-880-503-1
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                   LENGTH: 88
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Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 6, Appli
Sequence 6, Appli
Sequence 6, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Appli
Sequence 9, Appli
                                                                 3, 2003, 14:43:04; Search time 9.03448 Seconds (without alignments) 1811.566 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161,
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Sequence
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                                                                                                                    510
1 KTCYEGNGHFYRGKASTDTM.....QVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                                                                                                       Published Applications AA:*

| cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/USO7_NEW PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/USO6_PUB_OPD:*
4: /cgn2_6/ptodata/1/pubpaa/USO6_PUB_OPD:*
5: /cgn2_6/ptodata/1/pubpaa/USO7_NEW PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/USO7_NEW PUB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/USO7_NEW PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/USO8_NEW PUB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/USO8_NEW PUB.pep:*
10: /cgn2_6/ptodata/1/pubpaa/USO8_NEW PUB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/USO0_PUBCOMB.pep:*
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16: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/USO0_NEW PUB.pep:*
       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-10-237-667-12
US-10-237-866-12
US-10-237-866-12
US-10-237-886-12
US-10-237-881-12
US-10-237-684-12
US-09-880-503-8
US-09-880-503-8
US-09-880-503-3
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US-09-880-503-9
US-09-880-503-4
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US-10-301-822-161
                                                                                                                                                                                                   of hits satisfying chosen parameters:
                                                                                                                                                                               684280 seqs, 185983659 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                 OM protein - protein search, using sw model
                                                                                                                                                           Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                       seq length: 0 seq length: 2000000000
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                                                                                                          US-09-880-503-1
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Match 1
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Maximum DB
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Gaps

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Length 88; Indels 9 9

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Sequence 19, Applisequence 19, Applisequence 19, Applisequence 3, Applisequence 3, Applisequence 10, Applisequence 3, Applisequence 3, Applisequence 3, Applisequence 3, Applisequence 21, Applisequence 22, Applisequence 23, Applisequence 24, Applisequence 24, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Applisequence 26, Appli
                                                                        184, App
4, Appli
149, App
2, Appli
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APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR APPLICATION NUMBER: US 60/212,847
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTH Ver. 2.1
SEQ ID NO: 0.0
                                                                                                                                                Sequence 1
Sequence 2
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Seguence
Seguence
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Sequence
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1 US-10-131-985-21

1 US-10-174-11184

1 US-10-193-656-4

2 US-10-1247-671-149

2 US-10-987-455-19

1 US-09-987-455-19

1 US-09-987-455-19

1 US-09-987-455-19

1 US-09-987-455-19

1 US-09-987-455-10

1 US-09-987-457-10

1 US-09-987-455-11

1 US-09-987-455-11

1 US-09-987-455-11

1 US-09-987-455-12

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99.6
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                                 APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TIESUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT PILING DATE: 2001-06-13
PRIOR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
SUNNBER OF SEQ ID NOS: 18
SOFTWARE: PALENTIN VEF. 2.1
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APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REPERENCE: 9596-331
CURRENT PILING DATE: 2001-06-13
FRICR APPLICATION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SEQ ID NO 4
LENGTH: 135
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                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
100.0%; Score 510; DB 10; Length 96;
Best Local Similarity 100.0%; Pred. No. 3.9e-52;
Matches 88; Conservative 0; Mismatches 0; Indels
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100.0%; Pred. No. 5.6e-52;
tive 0; Mismatches 0;
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Patent No. US20020131964A1
GENERAL INFORMATION:
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US20020131964A1
                                                                                                                                                                                                                                                                          SEQ ID NO 9
LENGTH: 96
TYPE: PRT
ORGANISM: Homo sapiens
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88; Conserv
                      GENERAL INFORMATION
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US-09-880-503-4
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Best Local
  Patent No.
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Sequence 12, Application US/09984186
Parent No. US20020151011A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard

US-09-984-186-12

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Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
INVENTION: NOYEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
CONTAINING SAID POLYPEPTIDES
CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51 KTCYEGNOHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 110
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Publication No. US20030022308A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
Guitton, Jean-Dominique
Jung, Gerard
Fourier, Patrice
Yeh, Patrice
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 138;
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ilarity 100.0%; Pred. No. 5.7e-52;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                            CURRENT MACHINE TO THE MACHINE MACHINE SYSTEM SYSTEM 7.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/984,186

FILING DATE: 29-0Ct-2001

CLASSIFICATION DATA:

APPLICATION NUMBER: US/09/977,689

FILING DATE: 31-JAN-1997

APPLICATION NUMBER: US/08/797,689

FILING DATE: 31-JAN-1997

APPLICATION NUMBER: FR 92/01064

FILING DATE: 31-JAN-1997

APPLICATION NUMBER: PR 92/01064

FILING DATE: 28-JAN-1993

APPLICATION NUMBER: PCT/FR93/00085

FILING DATE: 28-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
                                                                                                                                                                 NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
TELEFAX: (610) 454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHRACATERISTICS:
LENGTH: 138 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                       ZIP: 19426
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                COUNTRY: USA
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Best Local Similarity
Matches 88; Conserv
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                                                                                                   TITLE OF
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US-10-237-667-12
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TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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                                                                                                                                      COMPUTER: Macintosh

COMPUTER: Macintosh

COMPUTER: Macintosh

COMPUTER: Macintosh

COMPUTER: Macintosh

COMPUTER: Macintosh

CONFORMARE: Word 5.1 (Patentin)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/237,708

FILING DATE: 10-Sep-2002

CLASSIFICATION: CURKNOWN>

PRIOR APPLICATION NUMBER: US/08/797,689

FILING DATE: 28-JUL-1997

APPLICATION NUMBER: FR 92/01064

FILING DATE: 28-JUL-1994

APPLICATION NUMBER: PR 92/01064

FILING DATE: 28-JUL-1994

APPLICATION NUMBER: PR 92/01064

FILING DATE: 28-JUL-1997

APPLICATION NUMBER: PT/FR93/00085

FILING DATE: 28-JAN-1993

ATTORNEY/AGENT INFORMATION:

NAME: Smith Ph. D., Julie K.

REGISTATION NUMBER: P-38,600.000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: ST92006-US
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RADRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fournier, Alain
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
       T: 500 Arcola Road, 3C43
Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12, Application US/10237866; Publication No. US2030036171A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 138 amino acids TYPE: amino acid
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                                                                                              ZIP: 19426
COMPUTER READABLE FORM:
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Matches 88; Conservative
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PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION CONTAINING SAID POLYPEPTIDES
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100.0%; Pred. No. 5.7e-52;
tive 0; Mismatches 0;
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FILING DATE: 10-Sep-2002
CLASSIFICATION: «UDKIDOWI)
PRIOR APPLICATION DATA:
APPLICATION DATA: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US/08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: PR 92/01064
FILING DATE: 21-JAN-1992
APPLICATION NUMBER: PR 92/01064
FILING DATE: 28-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P.38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3809
TELEFAX: (610) 454-3808
                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
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                                                                                                                                                                                                                ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
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Publication No. US20030036170A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
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LENGTH: 138 amino acids
TYPE: amino acid
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Best Local Similarity 100.
Matches 88; Conservative
                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                               COUNTRY: USA
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US-10-237-708-12
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PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGBRT INFORMATION:
NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: P-38,619
TELECOMMUNICATION INFORMATION:
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Road, 3C43
CITY: Collegeville
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COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,624
                APPLICATION NUMBER: US/10/237,871
FILING DATE: 10-Sep-2002
CLASSIFICATION: <Unknown>
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SEQUENCE DESCRIPTION: SEQ 1D NO: 12:
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Publication No. US20030082747A1
GENERAL INFORMATION:
APPLICANT: Fleer, Reinhard
Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
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CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                 (610) 454-3839
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INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 138 amino acids TYPE: amino acid
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COMPUTER READABLE FORM:
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COUNTRY: USA
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Guitton, Jean-Dominique
Jung, Gerard
Yeh, Patrice
TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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100.0%; Pred. No. 5.7e-52;
live 0; Mismatches 0;
                                                     CURREATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/237,866
FILING DATE: 10-Sep-2002
CLASSIFICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
APPLICATION NUMBER: US/08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INPORMATION:
NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Smith Ph.D., Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
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STREET: 500 Arcola Road, 3C43
CITY: Collegeville
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (Patentin)
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                    TYPE: Floppy disk
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SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
TYPE: amino acid
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                                              COMPUTER: Macintosh
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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Best Local Similarity 100.
Matches 88; Conservative
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TITLE OF INVENTION: NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES,
PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
CONTAINING SAID POLYPEPTIDES
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                                                                                                                 1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                           Gaps
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Query Match 100.0%; Score 510; DB 15; Length 138; Best Local Similarity 100.0%; Pred. No. 5.7e-52; Matches 88; Conservative 0; Mismatches 0; Indels 0
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LENGTH: 403
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; Sequence 8, Application US/09880503
; Patent No. US20020131964A1
; GENERAL INFORMATION:
; APPLICANT: CINES, Douglas B
; APPLICANT: HIGAZI, Abd Al-Roof
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
; TITLE OF INVENTION: TISSUE CONTRACTABILITY
; FILE REFERENCE: 9596-33
; CURRENT APPLICATION NUMBER: US/09/880,503
; CURRENT FILING DATE: 2001-06-13
; PRIOR APPLICATION NUMBER: US 60/212,847
; NUMBER OF SEQ ID NOS: 18
; SOFFWARE: Patentin Ver. 2.1
; SEQ ID NO 8
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Best Local Similarity 100.0%; Pred. No. 5.7e-52;
Matches 88; Conservative 0; Mismatches 0; Indels 0
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APPLICATION NUMBER: US/08/797,689
FILING DATE: 3.-JAN-1997
APPLICATION NUMBER: US 08/256,927
FILING DATE: 28-JUL-1994
APPLICATION NUMBER: FR 92/01064
FILING DATE: 31-JAN-1992
APPLICATION NUMBER: PCT/FR93/00085
FILING DATE: 28-JAN-1993
ATTORNEY/ABATI INFORMATION:
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3899
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100.0%; Pred. No. 5.9
tive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 12: SEQUENCE CHARACTERISTICS: LENGTH: 138 amino acida TYPE: amino acid
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CRGANISM: Homo sapiens
US-09-880-503-8
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US-09-880-503-8
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Matches 8
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RESULT 11

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TITLE OF INVENTION:

TITLE OF INVENTION:

CURRENT APPLICANT:

CURRENT APPLICATION NUMBER: US/10/106,698

CURRENT APPLICATION NUMBER: US/22-23

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR FILING DATE: 2000-09-28

PRIOR FILING DATE: 1999-09-29

PRIOR FILING DATE: 1999-09-29

PRIOR FILING DATE: 1999-09-10

RIOR APPLICATION NUMBER: US 60/157,137

PRIOR FILING DATE: 1999-11-03

NUMBER OF SEQ ID NOS: 8564

SOFTWARE: PATENTI VET: 3.0

SEQ ID NO 6266

LENGTH: 337
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APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd Al-Roof
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: TISSUE CONTRACTABILITY
FILE REFERENCE: 9596-331
CURRENT APPLICATION NUMBER: US/09/880, 503
CURRENT FILING DATE: 2001-06-13
PRIOR PAPLICANION NUMBER: US 60/212,847
PRIOR FILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 133
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100.0%; Score 510; DB 10;
Best Local Similarity 100.0%; Pred. No. 1.8e-51;
Matches 88; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
100.0%; Score 510; DB 15;
Best Local Similarity 100.0%; Pred. No. 1.5e-51;
Matches 88; Conservative 0; Mismatches 0;
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Sequence 6266, Application US/10106698
Publication No. US20030109690A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-880-503-6; Sequence 6, Application US/09880503; Patent No. US20020131964A1; GENERAL INFORMATION:
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SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 6
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US-09-880-503-6
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US-10-106-698-6266
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US-09-880-503-3
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Mismatches
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Publication No. US20030199440A1
GENERAL INPORMATION:
APPLICANT: Davies, Michael J
APPLICANT: Fish, Paul V
APPLICANT: Fish, Paul V
APPLICANT: Fish, Paul V
APPLICANT: Michael S
APPLICANT: Occleston, Nicholas L
TITLE OF INVENTION: Composition
FILE REFERENCE: PCS 10391A
CURRENT FILING DATE: 2002-04-25
CURRENT FILING DATE: 2002-04-25
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PRIOR APPLICATION NUMBER: US/09/726,295
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o. US20030148410A1
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Best Local Similarity 100.0
Matches 88; Conservative
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ORGANISM: Homo Sapiens
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; Publication No. US200
; GENERAL INFORMATION:
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US-10-301-822-161
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US-10-131-985-21
  88;
  Matches
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                                     GENERAL INFORMATION:
APPLICANT: CINES, Douglas B
APPLICANT: HIGAZI, Abd ALL PROOF
TITLE OF INVENTION: *COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: *COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: *COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND
TITLE OF INVENTION: *COMPOSITION OF THE CONTRACTABLLITY
CURRENT APPLICATION NUMBER: US/09/880,503
CURRENT FILING DATE: 2001-06-13
PRIOR FILING DATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTING PATE: 2000-06-20
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTING PATE: 2.1
SEQ ID NO 3
LENGTH: 411
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 411;
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APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Wang, Jieyi
APPLICANT: Menaber, Vicki L.
APPLICANT: Smith, Richard A.
APPLICANT: Walter, Karl A.
APPLICANT: Gealii, Rohinton
APPLICANT: Edalii, Rohinton
APPLICANT: Holzman, Thomas F.
TILLE OF INVENTION: HIGHLY CRYSTALLINE URCKINASE
FILE REFERENCE: 6310.US.Pl
CURRENT FILING DATE: 1999-03-05
PRIOR PILING DATE: 1998-03-06
PRIOR PILING DATE: 1998-03-06
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0

FEMALE APPLICATION NOS: 23
SEQ ID NO 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 510; DB 10;
100.0%; Pred. No. 1.9e-51;
tive 0; Mismatches 0;
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LOCATION: (1)...(20)
OTHER INFORMATION: Leader sequence
NAME/KEY: VARIANT
LOCATION: (279)...(279)
OTHER INFORMATION: Xaa = any amino acid
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; OTHER INFORMATION: Xaa = any amino acid
US-09-264-468B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/09264468B Patent No. US20020106775A1
Sequence 3, Application US/09880503
Patent No. US20020131964A1
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Best Local Similarity 100.0
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ORGANISM: Homo sapiens
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ORGANISM: Homo sapiens
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Best Local Similarity
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APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Berger, Allison
APPLICANT: Guillemette, Tracy L.
APPLICANT: Guillemette, Tracy L.
APPLICANT: Monaham, John E.
APPLICANT: Monaham, John E.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: MONATION: WETHODS POR IDENTIFICATION, ASSESSMENT, PREVENTION, THERAPY OF COLON CANCER
TITLE OF INVENTION: THERAPY OF COLON CANCER
TITLE OF INVENTION: THERAPY OF COLON CANCER
TITLE OF INVENTION NUMBER: US 60/339,971
PRIOR APPLICATION NUMBER: US 60/339,971
PRIOR APPLICATION NUMBER: US 60/331,988
PRIOR APPLICATION NUMBER: US 60/381,988
PRIOR FILING DATE: 2002-05-20
NUMBER OF SEQ ID NOS: 228
SEQ ID NOS: 228
SEQ ID NOS: 228
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Gaps
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100.0%; Pred. No. 2e-51;
ive 0; Mismatches 0;
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TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY
TITLE OF INVENTION: OF CERVICAL CANCER
FILE REPERENCE: MRI-035
CURRENT APPLICATION NUMBER: US/10/171,311
CURRENT FILING DATE: 2002-06-12
PRIOR APPLICATION NUMBER: US 60/298,159
PRIOR FILING DATE: 2001-06-13
PRIOR FILING DATE: 2001-06-13
PRIOR FILING DATE: 2001-11-14
NUMBER OF SEQ ID NOS: 238
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 127
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APPLICANT: HOLMDAHL, RIKARD
APPLICANT: HOLMDAHL, RIKARD
APPLICANT: LI, Jinan
TITLE CANTI: LI, Jinan
TITLE CP INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
FILE REFERENCE: 3810/1J577-US3
CURRENT APPLICATION NUMBER: US10/193,656
CURRENT FILING DATE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR APPLICATION NUMBER: US 60/304,490
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: US 60/305,182
SPROR FILING DATE: 2001-07-13
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATCHETIN VERSION 3.1
SEQ ID NO 4
LENGHH: 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 510; DB 15;
100.0%; Pred. No. 2e-51;
tive 0; Mismatches 0;
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100.0%; Score 510; DB 15;
Best Local Similarity 100.0%; Pred. No. 2e-51;
Matches 88; Conservative 0; Mismatches 0;
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PUBLICATION INFORMATION:
DATABASE ACCESSION UNMEER: GenBank / P00749
DATABASE ENTRY DATE: 1986-07-21
RELEVANT RESIDUES: (1)..(431)
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Publication No. US20030096733A1
GENERAL INFORMATION:
APPLICANT: NY, Tor
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Best Local Similarity 100.0
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US-10-193-656-4
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                                                                                                                                                                                                                                                                                                                                                                                           DB 12; Length 431;
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100.0%; Pred. No. 2e-51;
ive 0; Mismatches 0;
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Sequence 2, Application US/10076421
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Publication No. US2033087270A1
GENERAL INFORMATION:
APPLICANT: Schlegel, Robert
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Chao, Xunei
Monahan, John
Kamatkar, Shubhangi
Glatt, Karen
Ganavarapu, Manjula
Hoersh, Sebastian
                        PRIOR FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: GB 99:
PRIOR FILING DATE: 1999-12-29
NUMBER OF SEQ ID NOS: 60
SOFTWARRE: Patentin Ver. 2.1
LEQUID NO 21
LEGGHH: 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                          88; Conservative
                                                                                                                                                                                                                                                       TYPE: PRT
CRGANISM: Homo sapiens
US-10-131-985-21
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ORGANISM: Homo sapiens
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Best Local Similarity
Matches 88; Conserv
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US-10-171-311-184
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| Sequence 2. Application US/10407821
| Sequence 2. Application US/10407821
| Publication No. US20030219386A1
| GENERAL INFORMATION:
| APPLICANT IDELL, STEVEN
| TITLE OF INVENTION: TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL
| TITLE OF INVENTION: TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL
| TITLE OF INVENTION: TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL
| TITLE OF INVENTION: DATE: 2003-04-04
| CURRENT FILING DATE: 2003-04-04
| PRIOR FILING DATE: 2002-09-27
| PRIOR FILING DATE: 2002-09-05
| NUMBER OF SEQ ID NOS: 3
| SOFTWARE PARENTIN VET 2.11
| SEQ ID NO 2
| LENGTH: 411
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99.6%; Score 508; DB 12; Length 431;
Best Local Similarity 98.9%; Pred. No. 3.4e-51;
Matches 87; Conservative 1; Mismatches 0; Indels
RESULT 20
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US-10-407-821-2
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Matches 87; Conserv
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APPLICANT: Manosroi, Jiradej
APPLICANT: Manosroi, Jiradej
APPLICANT: Manosroi, Jiradej
APPLICANT: Tayapiwatana, Chatchai
APPLICANT: Tayapiwatana, Chatchai
APPLICANT: Tayapiwatana, Chatchai
APPLICANT: Werner, Rolf-Guenther
TITLE OF INVENTION: Methods for Large Scale Protein Production in Prokaryotes
FILE REPERENCE: 0652.2180001
CURRENT APPLICATION NUMBER: US/09/987,457
CURRENT PILING DATE: 2001-11-14
PRIOR FILING DATE: 2001-02-15
PRIOR PELING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 18
SOFTMARE: Patentin Ver. 2.1
LENGTH: 527
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APPLICANT: Jiradej Manosroi
APPLICANT: Jiradej Manosroi
APPLICANT: Chacroai Tayapiwatana
APPLICANT: Chacroai Tayapiwatana
APPLICANT: Chacroai Tayapiwatana
APPLICANT: Chacroai Tayapiwatana
APPLICANT: Rolf-Guenther Werner
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: DNA-Derived tPA or K25 Molecules
FILE REFERENCE: 0652.2190001
CURRENT APPLICATION NUMBER: U$/09/987,455
CURRENT FILING DATE: 2001-11-14
PRIOR FILING DATE: 2001-2-15-686,574
PRIOR FILING DATE: 2000-11-14
NUMBER OF SEQ ID NOS: 25
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 19
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44.3%; Score 226; DB 11;
Best Local Similarity 47.7%; Pred. No. 4.3e-18;
Matches 41; Conservative 9; Mismatches 36;
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                                                                108 RRRPWCYVQVGLKLLVQECMVHDCADGK 135
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                   61 RRRPWCYVQVGLKPLVQECMVHDCADGK
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Publication No. US20030049729A1
GENERAL INFORMATION:
                                                                                                                                                                            US-09-987-457-18
; Sequence 18, Application US/09987457
; Publication No. US20030013150A1
; GENERAL INFORMATION:
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; ORGANISM: Homo sapiens (tPA)
US-09-987-457-18
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TYPE: PRT
ORGANISM: Homo sapiens
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128 RRRPWCYVQVGLKPLVQECMVHDCADGK 155
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us-09-880-503-1.rapb

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TYPE: PRT
ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: GenBank / P00750
DATABASE ENTRY DYTE: 1386-07-21
RELEVANT RESIDUES: (1)..(562)
US-10-193-656-8
                                                                                                                                                                   186 SKPWCYVFKAGKYSSEFCSTPACSEG 211
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Publication No. US20030096733A1
GENERAL INFORMATION:
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; Sequence 4, Application US/10443701
; Publication No. US20030199016A1
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                    Sequence 7. Application US/09969271

Sequence 7. Application US/09969271

Patent No. US20020098179A1

GENERAL INFORMATION:

APPLICANT: Pfizer Inc. (All designated States except GB and EP (GB));

APPLICANT: Ffizer Limited (GB and EP (GB) only);

TITLE OF INVENTION: Pharmaceutical Combinations;

FILE REFERENCE: PGS10951APME

CURRENT APPLICATION NUMBER: US/09/969,271

CURRENT FILING DATE: 2001-10-01

PRIOR FILING DATE: 2001-10-07

NUMBER OF SEQ ID NOS: 7

SEQ ID NO 7

SEQ ID NO 7

LEAST- SEQ ID NOS: 7

LEAST- SEQ ID NO 7

LEAST- SEQ ID NO 7

LEAST- SEQ ID NO 7

LEAST- SEQ ID NO 7

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; NAME/KEX: misc feature
; OTHER INFORMATION: Incyte ID No. US20020156263A1 1001470CD1
US-09-974-298-145
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Best Local Similarity 47.7%; Pred. No. 4.3e-18;
Matches 41; Conservative 9; Mismatches 36; Indels
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Patent No. US2002015626341

GENERAL INFORMATION:
TITLE OF INVENTION:
FILE REFERENCE: PA-0037 P

CURRENT APPLICATION NUMBER: US/09/974,298

CURRENT FILING DATE: 2001-10-04

PRIOR APPLICATION NUMBER: 60/238,331

PRIOR FILING DATE: 2000-65-10

NUMBER OF SEQ ID NOS: 194

SOFTWARE: PERL PROGram

SOFTWARE: PERL PROGram

SOFTWARE: PERL PROGram
                                                                                                                                                                                                                                 186 SKPWCYVFKAGKYSSEFCSTPACSEG 211
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US-09-969-271-7
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ORGANISM: Homo sapiens
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Best Local Similarity
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126 TCYEDQGISYRGTWSTAESGAECTNWNSSALAQKPYSGRRPDAIRLGLGGNHNYCRNPDRD 185
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2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: XL, Yuan
TILLE OF INVENTION: REVERSE-PHASE HPLC ASSAY FOR PLASMINOGEN ACTIVATORS
FILE REPERRINCE: P1788H;
CURRENT APPLICATION NUMBER: US/10/443,701
CURRENT FILING DATE: 2003-05-21
PRIOR PILING DATE: 2000-11-01
PRIOR FILING DATE: 1999-11-04
SEQ ID NOS: 4
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 TCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR
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APPLICANT: HOLMDAHL, Rikard
APPLICANT: L1, Jinan
TITLE OF INVENTION: NOVEL DRUG TARGETS FOR ARTHRITIS
FILE REFERENCE: 3310/13577-US3
CURRENT FILING DATE: 2002-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/304,461
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/304,490
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR APPLICATION NUMBER: US 60/305,182
PRIOR PRING DATE: 2001-07-13
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PARENTIN Verfaion 3.1
LENGHH: 562
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44.3%; Score 226; DB 12;
Best Local Similarity 47.7%; Pred. No. 4.6e-18;
Matches 41; Conservative 9; Mismatches 36;
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ORGANISM: Artificial Sequence

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Sequence 10. Application US/09987457

| Sequence 10. Application US/09987457
| Publication No. US20030013150A1
| GENERAL INFORMATION:
| APPLICANT: Manosroi, Aranya
| APPLICANT: Tayapiwatana, Chatchai
| APPLICANT: Tayapiwatana, Chatchai
| APPLICANT: Merner, Rolf-Guenther
| APPLICANT: Werner, Rolf-Guenther
| TITLE OF INVENTION: Methods for Large Scale Protein Production in Prokaryotes
| FILE REFERENCE: 0652_218001
| CURRENT APPLICATION NUMBER: US/09/987,457
| CURRENT FILING DATE: 2001-11-14
| PRIOR PILING DATE: 2001-11-14
| PRIOR FILING DATE: 2001-02-15
| PRIOR FILING DATE: 2001-01-14
| PRIOR FILING DATE: 2001-02-15
| PRIOR FILING DATE: 2001-02-15
| PRIOR FILING DATE: 2001-02-15
| PRIOR FILING DATE: 2001-02-15
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| PRIOR FILING DATE: 2001-02-15
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                                                                                                   Gaps
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TITLE OF INVENTION: Tissue Plasminogen Activator-Like Protease FILE REPERENCE: PP378P1
CURRENT APPLICATION NUMBER: US/10/057,951
CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: US 09/411,977
PRIOR APPLICATION NUMBER: US 09/411,977
PRIOR PILING DATE: 1999-10-04
PRIOR FILING DATE: 1998-05-27
PRIOR FILING DATE: 1998-05-27
PRIOR FILING DATE: 1997-05-28
NUMBER OF SEQ ID NOS: 3.1
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     Length 562;
44.3%; Score 226; DB 15; Length 5 larity 47.7%; Pred. No. 4.6e-18; Conservative 9; Mismatches 36; Indels
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Publication No. US20020177213A1
GENERAL INFORMATION:
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SEQ ID NO 10
LENGTH: 354
TYPE: PRT
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Matches 39; Conservative
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ORGANISM: Homo sapiens
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US-10-057-951-3
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3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
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                                                                                                                                                                                                                                  3 CYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALOLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                               7 CYFGNGSAYRGTHSLTESGASCLFWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11, Application US/09987455
FUBLICATION NO. US20030049729A1
GENERAL INFORMATION:
APPLICANT: Aranya Manosroi
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Chatchai Tayapiwatana
APPLICANT: Friedrich Goetz
APPLICANT: Rolf-Guenther Werner
TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
TITLE OF INVENTION: Methods for Large Scale Production
TITLE OF INVENTION: MAT-Derived tPA or K2S Molecules
FILE REFERENCE: 0552.219001
CURRENT APPLICATION NUMBER: 00/268,574
PRIOR APPLICATION NUMBER: 60/268,574
PRIOR APPLICATION NUMBER: GB 0027779.8
PRIOR PELING DATE: 2000-11-14
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                                                                                                                                                                                 Gaps
FEATURE: OTHER INFORMATION: Description of Artificial Sequence: part of the OTHER INFORMATION: recombinant K2S molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Description of Artificial Sequence: K2S 174-527 US-09-987-455-11
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42.2%; Score 215; DB 11; Length 3:
Best Local Similarity 47.0%; Pred. No. 5.4e-17;
Matches 39; Conservative 8; Mismatches 36; Indels
                                                                                                                                                                              36; Indels
                                                                                                                       Score 215; DB 11;
Pred. No. 5.4e-17;
8; Mismatches 36;
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Job time : 9.03448 secs
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                                                                                                                                                                                                                                                                                                                                                                                     67 KPWCHVLKNRRLTWEYCDVPSCS 89
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                                                                                                                       Query Match
Best Local Similarity 47.0%;
Matches 39; Conservative
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SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 11
LENGTH: 354
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US-09-987-455-11
                                                                            US-09-987-457-10
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GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd. Copyright

protein search, using sw model protein e, December Run on:

2003, 14:34:58; Search time 4.55172 Seconds (without alignments) 1859.261 Million cell updates/sec

Title: Perfect score:

US-09-880-503-1 510 1 KTCYEGNGHPYRGKASTDTM.....QVGLKPLVQECMVHDCADGK 88 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 segs, 96168682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 2000000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 76:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

plasmin (EC 3.4.21	plasmin (EC 3.4.21	plasmin (EC 3.4.21	neurotrophic recep	neurotrophic recep	plasmin (EC 3.4.21	hypothetical prote	macrophage-stimula	plasmin (EC 3.4.21	neurotrophic recep	hepatocyte growth	hepatocyte growth	plasmin (EC 3.4.21	hepatocyte growth	hepatocyte growth	apolipoprotein(a)
146260	PLPG	B61545	B45082	A45082	PLHU	T18840	A47136	B30848	A48289	A60185	A35644	A61545	JH0579	151285	T18518
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## ALIGNMENTS

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u-plasminogen activator (EC 3.4.21.73) precursor [validated] - human N;Alternate names: cellular plasminogen activator; urokinase; urokinase-type plasminog-N;Contains: urokinase-type plasminogen activator chain A; urokinase-type plasminogen a

C;Species: Homo sapiens (man)
C;Date: 17-Dec-1982 #sequence\_revision 04-Dec-1986 #text\_change 15-Sep-2000
C;Date: 17-Dec-1982 #sequence\_revision 04-Dec-1986 #text\_change 15-Sep-2000
C;Accession: A00911, IS2209, JT0102; A37561; I38102; S65783; A37562; A37563; A37564; A
R;Riccio, A.; Grimaldi, G.; Verde, P.; Sebastio, G.; Boast, S.; Blasi, F.
A;Nucleic Acids Res. 13, 2759-2771, 1985
A;Title: The human urokinase-plasminogen activator gene and its promoter.
A;Reference number: A00931; MUID:85215647; PMID:2987867

A; Recent and the control of the con

A; Molecule type: mRNA

A;Residues: 66-431 <VER>
A;Residues: 66-431 <VER>
A;Crosar erferences: GB:D00244; NID:g220138
R;dacobs, P.; Cravador, A.; Loriau, R.; Brockly, F.; Colau, B.; Chuchana, P.; van Else
- DNA 4, 139-146, 1985

Affice: Molecular Cloning, sequencing, and expression in Bscherichia coli of human pr A;Reference number: 138102 MUD:85203359; PMID:3888571
A;Accession: 138102 A;Actaus: preliminary
A;Molecule type: mRNA
A;Residues: 1-150, W',152-213,'I',215-385,'C',387-429,'V',431 cJAC>
A;Cross-references: EMBL:X02760; NID:935297; PIDN:CAA26535.1; PID:935298

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Keywords: fibrinolysis; glycoprotein; heterodimer; hydrolase; kringle; serine
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A. Status: prefailminary
A. Retains: Paby Mail: 951843 (17, 215, 431 e 705)
A. Status: prefailminary
A. Molecule type: mRNA
A. Recented type: mRNA
A. Recented type: mRNA
A. Recented: BMBL: D11143; NID: 91311467; PIDN: BAA01919.1; PID: 9119928
B. Guraler, W. A.: Steffens, G. J.; Otting, F.; Kim, S. M. A.; Frankus, E.; Flohe, L.
A. Title: The primary structure of high molecular mass urokinase from human urine.
A. Recension: A3762 (17, Mar. H.; Rickli, E.E.; Gillessen, D.; Lergier, W.; Studer, R.O.
A. Richaller, J. Nack, H.; Rickli, E.E.; Gillessen, D.; Lergier, W.; Studer, R.O.
A. Richaller, J. Nack, H.; Rickli, E.E.; Gillessen, D.; Lergier, W.; Studer, R.O.
A. Richaller, J. Nack, H.; Rickli, E.E.; Gillessen, D.; Lergier, W.; Studer, R.O.
A. Richaller, J. Mar. M. A. Statement of the mass urokinase from human urine.
A. Recession: A3763
A. Mille: Human low-molecular weight urinary urokinase. Partial characterization and prel.
A. Reference number: A3763, MUID: 8303608; PMID: 679491
A. Reference mumber: A3764, MUID: 8303608; PMID: 679491
A. Reference mumber: A3764, MUID: 83056099; PMID: 6794572
A. Richer and A3764
A. Molecule type: protein
A. Reference mumber: A3764, MUID: 83056099; PMID: 6794572
A. Richer and A3764
A. Molecule type: protein
A. Reference number: A3764, MUID: 83056099; PMID: 6794572
A. A. Title: The complete and attempt to determine its attachment site
A. Miller and A3764
A. Molecule type: protein
A. Reference number: A35649; MUID: 90365737; PMID: 2393398
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A;Contents: annotation; conformation and disulfide bond assignments by (1)H-NMR
K;Hansen, A.P.; Petros, A.M.; Meadows, R.P.; Netteshelm, D.G.; Mazar, A.P.; Olejniczak, submitted to the Brookhaven Protein Data Bank, January 1994
A;Reference number: A66822; PDB:1URK
A;Contents: annotation; conformation and disulfide bond assignments by (1)H-NMR, residue R;Spraggon, G.S.; Phillips, C.; Nowak, U.K.; Ponting, C.P.; Saunders, D.; Dobson, C.M.; Submitted to the Brookhaven Protein Data Bank, July 1995
A;Reference number: A6608; PDB:1UM
A;Contents: annotation; X-ray crystallography, 2.5 angstroms, residues 168-175;179-426
C;Comment: This enzyme is found in urine in a high molecular mass form, consisting of A;Generics:
C;Genetics:
A;Genetics:
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M.; Ushiyama, Y.; Sakai, M.; Tamaki, S.; Hara, H.; Takahashi, K.; Sawasaki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of the kringle domain
          R;Yoshimoto, M.; Ushiyama, Y.; Sakai, M.; Tamaki, S.; Hara, H.; Takahashi, K.; Sawasak
Biochim, Biophys. Acta 1129; 83-89; 1996
A;Title: Characterization of single chain urokinase-type plasminogen activator with a
A;Reference number: S65783; MUID:96186279; PMID:8652631
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A; Residues: 21-34 «RAB»
A; Residues: 21-34 «RAB»
A; Residues: 21-34 «RAB»
A; Residues: 21-34 «RAB»
Submitted to the Brookhaven Protein Data Bank, July 1993
A; Reference number: A51255; PDB:1KDU
A; Reference number: A51255; PDB:1KDU
A; Contents: annotation; conformation and disulfide bond assignments by (1)H-NWR, Rid, X; Smith, R.A.G; Dobson, C.M.
Sichemistry 31, 9562-9571, 1992
A; Title: Sequential (1)H NMR assignments and secondary structure of the kringle d
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CyAccession: 814687; 808651

Ryau, Y.P. T.; Wang, T.W.; Clowes, A.W.

Nucleic Acids Res. 18, 3411, 1990

A;Title: Nucleotide and deduced amino acid sequences of baboon urokinase-type plasmino
A;Reference number: $14687; MUID:90287734; PMID:211376

A;Reference number: $14687, MUID:90287734; PMID:211376

A;Recule type: mRNA
A;Residues: 1433 & AUY>
A;Residues: 1433 & AUY>
A;Residues: 1433 & AUY>
A;Residues: 1433 & AUY>
A;Residues: 1433 & AUY>
A;Residues: 1433 & AUY>
A;Coss-references: EMBL:X51935; NID:938130; PIDN:CAA36200.1; PID:938131
C;Superfamily: urokinase-type plasminogen activator; EGF homology; Kringle; serine proteinase
F;1-20/Domain: signal sequence #status predicted <ACH>
F;21-176/Product: plasminogen activator chain A #status predicted <ACH>
F;90-150/Domain: EGF homology <EGF>
F;91-150/Domain: Lipsaminogen activator chain B #status predicted <BCH>
F;178-421/Domain: Lipsaminogen activator chain B #status predicted <BCH>
F;178-421/Domain: Lipsaminogen activator chain B;1844402/Disulfide bonds: #status predicted
F;223,274,378/Active site: His, Asp, Ser #status predicted
F;223,274,378/Active site: His, Asp, Ser #status predicted
F;224/Binding site: carbohydrate (Asn) (covalent) #status predicted
Fil-20/Domain: signal sequence #status predicted <516.
Fil-20/Domain: signal sequence #status predicted <516.
Fil-20/Domain: signal sequence #status predicted <516.
Fil-31/Product: urokinase-type plasminogen activator chain A #status experimental <M Fil-17/Product: urokinase-type plasminogen activator chain B #status experimental Fil50-17/Product: urokinase-type plasminogen activator chain B #status experimental Fil50-17/Product: urokinase-type plasminogen activator chain B #status experimental Fil50-17/Product: urokinase-type plasminogen activator chain B #status experimental </p>
Fil70-419/Domain: trypsin homology cRx>
Fil70-419/Domain: trypsin homology cRx>
Fil70-419/Domain: trypsin homology cRx>
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Fil70-419/Domain: trypsin
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C;Species: Sus scrofa domestica (domestic pig)
C;Date: 04-Dec-1986 #sequence_revision 17-Mar-1987 #text_change 07-Aug-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C.Species: Papio cynocephalus, Papio hamadryas cynocephalus (yellow baboon)
C.Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 18-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 KTCYBGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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100.0%; Pred. No. 4.3e-48;
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Pred. No. 2.9e-44;
1; Mismatches 4;
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C. Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; t C; Superfamily: urokinase-type plasminogen stringle; serine proteinase F;1-19/Domain: signal sequence #status predicted <5:G> F;1-19/Domain: signal sequence #status predicted <5:G> F;1-10/Domain: signal sequence #status predicted <5:G> F;20-17/Product: urokinase-type plasminogen activator chain A #status predicted <ACH> F;31-62/Domain: EGF homology <EGF> F;70-151/Domain: kringle homology <KRG> F;70-151/Domain: kringle homology <TRY> F;719-432/Domain: trypsin homology <TRY> F;179-420/Domain: trypsin homology <TRY> F;168-300,210-226,218-289,314-383,346-362,373-401/Disulfide bonds: #status predicted F;255,276,377/Active site: His, Asp, Ser #status predicted
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Astrite: Bovine urokinase-type plasminogen activator and its receptor: cloning and ind A; Title: Bovine urokinase-type plasminogen activator. AfReference number: JN0560; MJID:93216119; PMID:8385052
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A; Cross-references: GB:L03546; NID:g163800; PIDN:AAA51419.1; PID:g163801
C; Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; C; Superfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; C; Keywords: glycoprotein; heterodimar; hydrolase; kringle; serine proteinase F;1-20/Domain: signal sequence #status predicted <SIG>F;21-179/Product: urokinase-type plasminogen activator chain A #status predicted <MAI>F;21-179/Product: urokinase-type plasminogen activator chain A #status predicted <ACHF;33-64/Domain: Kringle homology <KRG>F;72-153/Domain: Kringle homology <KRG>F;181-433/Product: plasminogen activator chain B #status predicted <MA2>F;181-421/Domain: trypsin homology <RRY</td>

F;181-421/Domain: trypsin homology <KRC>F;181-421/Domain: trypsin homology <KRC>F;181-421/Domain: trypsin homology <KRC>F;181-421/Domain: trypsin homology <KRC>F;226,277,378/Active site: His, Asp, Ser #status predicted

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C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jul-1999
C;Accession: JNO560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u-plasminogen activator (EC 3.4.21.73) precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 30-Sep.1987 #sequence_revision 30-Sep-1987 #text_change 18-Jun-1999
C;Accession: A29420; A24615
A.Cross-references: EMBL:X66907; NID:g396200; PIDN:CAA47356.1; PID:g938279
C;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.6%; Score 396; DB 1; 76.1%; Pred. No. 1.3e-35;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
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Best Local Similarity 79.5
Matches 70; Conservative
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Best Local Similarity
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Ascontents: annotation; correction to residue 241
Csenetics: annotation; correction to residue 241
Csenetics: 19/3; 31/1; 67/1; 125/2; 165/1; 238/2; 288/1; 335/1; 384/3
Csuperfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; try
Cskywords: 19/3porotein; heterodimer; hydrolase; kringle; serine proteinase
Cskywords: glyoporotein; heterodimer; hydrolase; kringle; serine proteinase
F;1-20/Domain: signal sequence #status predicted <SIG>F;1-20/Domain: signal sequence #status predicted <SIG>F;1-20/Domain: EGF homology <EGF>F;1-2153/Domain: kringle homology <ERS>F;190-442/Product: urokinase-type plasminogen activator chain B #status predicted <BCH>F;190-442/Product: urokinase-type plasminogen activator chain B #status predicted <BCH>F;190-430/Domain: trypsin homology <ERS>F;190-442/Product: carbohydrate (Asn) (covalent) #status predicted
F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS>F;150-430/Domain: trypsin homology <ERS
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A;Accession: $24604
A;Accession: $24604
A;Accession: $24604
A;Accession: $24604
A;Accession: $24604
A;Cross_references: BRBL:X65651; NID:957456; PIDN:CAA46601.1; PID:957457
A;Cross_references: Lissue kidney
B;Henderson, B.K.; Tansey, W.P.; Phillips, S.M.; Ramshaw, I.A.; Kefford, R.F.
Cancer Res. 52, 2489-2496, 1992
A;Title: Transcriptional and posttranscriptional activation of urokinase plasminogen act
A;Reference number: I60186; MUID:92233409; PMID:1568219
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C; Date: 18-Oct-1989 #sequence revision 10-Feb-1995 #text_change 18-Jun-1999
C; Accession: S24604; 160186; IS3472; S18932
R; Rabbani, S.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
        C; Accession: A00932
R; Nagamine, Y.; Pearson, D.; Altus, M.S.; Reich, E.

Mrileic Acids Res. 12, 9525-9541, 1984
A; Title: cDNA and gene nucleotide sequence of porcine plasminogen activator. A; Reference number: A00932; MUID:85087954; PMID:6096832
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-432 <RES>
A;Cross-references: EMBL:X63434; NID:957465; PIDN:CAA45028.1; PID:957466
A;Experimental source: strain Fischer 344; tissue mammary
R;Ragno, P.; Cassano, S.; Degen, J.; Kessler, C.; Blasi, F.; Rossi, G.
FEBS Lett. 306, 193-198, 1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                submitted to the Protein Sequence Database, December 1986
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 420; DB 1;
Pred. No. 3.1e-38;
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A;Molecule type: DNA
A;Residues: 31-62 <RE2>
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                                                                                                                                                                                                                  A, Accession: A00932
A; Molecule type: DNA
A; Residues: 1-240, 'H', 242-442 <NAG1>
A; Experimental source: Kidney cell line LLC-PK1
R; Nagamine, Y
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Best Local Similarity 81.8
Matches 72; Conservative
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C;Accession: A34369
R;Gardell, S.J.; Duong, D.T.; Diehl, R.E.; York, J.D.; Hare, T.R.; Register, R.B.; Jac J. Blol. Chem. 264, 17947-17952, 1989
A;Title: Isolation, characterization, and cDNA cloning of a vampire bat salivary plasm A;Reference number: A34369; WUID:90036867; PMID:2509450
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F;228-471/Domain: trypsin homology <TRY>
F;227-72_70-79_87-98,92-109,111-120,128-209,149-191,180-204,214-345,257-273,265-334,359
F;272,321,428/Active site: His, Asp. Ser #status predicted
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A, Residues: 1-477 < GAR>
A, Residues: 1-477 < GAR>
A, Residues: 1-477 < GAR>
A, Cross-references: GB.J05082; NID:g166080; PIDN:AAA31596.1; PID:g166081
C, Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat 1 C, Reywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase C, Reywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase F, 2-2, TDomain: group sequence #status predicted < SIG>
F, 2-36, Domain: propeptide #status predicted < PRO>
F, 37-477/Product: plasminogen activator #status predicted < PLA>
F, 2-70/Domain: fibronectin type I repeat homology < IFA>
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C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat C;Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
E;1-21/Domain: signal sequence #status predicted <SIG>
F;22-36/Domain: propeptide #status predicted <PRO>
F;37-477/Product: plasminogen activator alpha-2 #status predicted <PLA>
F;2-36/Domain: fibronectin type I repeat homology <IFA>
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A;Titler The plasminogen activator family from the salivary gland of the vampire bat A;Reference number: JS0597; MUID:92039036; PMID:1937019
A;Accession: JS0598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Megaderma lyra)
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                                                                                                                            81 TCYKDQGVTYRGTWSTSESGAQCINWNSNLLTRRTYNGRRSDAITLGLGNHNYCRNPDNN 140
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C;Decies: J1-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C,Species: Megaderma lyra
C,Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                   2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR
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    Gaps
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    false vampire bat

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; Pred. No. 1.2e-18;
12; Mismatches 30,
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    Mismatches
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187 SKPWCYVIKASKFILEFCSVPVCS 210
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141 SKPWCYVIKASKFILEFCSVPVCS
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    12;
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        Conservative
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Best Local Similarity
Matches 42; Conserv
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A;Residues: 1-477 <KRA>
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    42;
    Matches
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A,Residues: 1-433 (ABL)
A,Cross-references: GB:X02389; NID:g55127; PIDN:CAA26231.1; PID:g55128
A,Cross-references: GB:X02389; NID:g55127; PIDN:CAA26231.1; PID:g55128
A,Cross-references: GB:X02389; NID:g5127; PIDN:CAA26231.1; PID:g55128
A,Cross-references: GB:X02389; NID:g512, 229/2; 279/1; 375/3
C,Superfamily: urokinase-type plasminogen activator; EGF homology; Kringle homology; LY
C,Reywords: Glycoprotein; heterodimer; hydrolase; kringle; serine proteinase
F;11-20/Domain: signal sequence #status predicted cAGH>
F;21-178/Product: urokinase-type plasminogen activator chain A #status predicted cAGH>
F;71-152/Domain: kringle homology cAGR>
F;180-433/Product: urokinase-type plasminogen activator chain B #status predicted cAGH>
F;180-410-Domain: trypash homology cAGR>
F;180-421/Domain: trypash homology cAGR>
F;180-431/Product: urokinase-type plasminogen activator chain B #status predicted
F;226,277,378/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                  A;Cross-references: GB:M17922; NID:g202296; PIDN:AAA40539.1; PID:g202297
R;Belin, D.; Vassalli, J.D.; Combepine, C.; Godeau, F.; Nagamine, Y.; Reich, E.; Kocher, Br. J. Blochem. 148, 225-232; 1985
A;Title: Cloning, nucleotide sequencing and expression of cDNAs encoding mouse urokinase A;Reference number: A24615; MUID:85179474; PMID:2985383
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69 KTCYHGNGDSYRGKANTDTKGRPCLAWNAPAVLQKPYNAHRPDAISLGLGKHNYCRNPDN
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                                                                                           gene
R;Degen, S.J.F.; Heckel, J.L.; Reich, E.; Degen, J.L. Biochemistry 26, 8270-8279, 1987 A;Title: The murine urokinase-type plasminogen activator A;Reference number: A29420; MUID:88163489; PMID:2831940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 241; DB 2;
Pred. No. 1.1e-18;
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Best Local Similarity
                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-433 <DEG>
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                                                                                                                                                                          A; Accession: A29420
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A;Cross-references: EMBL:X07393; NID:g37243; PIDN:CAA30302.1; PID:g37244
A;Experimental source: fetal lung cells
A;Experimental source: fetal lung cells
A;Kagitani, H; Tagawa, M.; Hatanaka, K.; Ikari, T.; Saito, A.; Bando, H.; Okada, K.; Ikragitani, H; Tagawa, H; Okada, K.; Ikragitani, H; Tagawa, H; 198, 145-149, 1985
A;Title: Expression in Escherichia coli of finger-domain lacking tissue-type plasminog-A;Reference number: A91343; MUID:85285620; PMID:3896853
    R;Ny, T.; Elgh, F.; Lund, B. Proc. Natl. Acad. Sci. U.S.A. 81, 5355-5359, 1984
A;Title: The structure of the human tissue-type plasminogen activator gene: correlatio: A;Reference number: A94004; MUID:84298137; PMID:6089198
A;Accession: A94004
                                                                                                                                                                                                                                                                                                                                            A;Note: the codon given for residue 93 (ACC) is inconsistent with the authors' translar R;Friezner Degen, S.J.; Rajput, B.; Reich, E. J. Biol. Chem. 261, 6972-6983, 1986
A;Title: The human tissue plasminogen activator gene.
A;Reference number: A23529; MUID:86196143; PMID:3009482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:K03021; NID:g339817; PIDN:AAA98809.1; PID:g339818
R;Itagaki, Y.; Yasuda, H.; Morinaga, T.; Mitsuda, S.; Higashio, K.
Agric. Biol. Chem. 55, 1225-1232, 1991
A;Title: Purification and characterization of tissue plasminogen activator secreted by A;Reference number: J70562; MUID:91291340; PMID:1368681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A Experimental source: embryonic lung fibroblast IMR-90 cells.

A;Note: part of this sequence, including the amino end of the mature protein, was conf.

B;Pennica, D.; Holmes, W.E.; Kohr, W.J.; Harkins, R.N.; Vehar, G.A.; Ward, C.A.; Benne.

Nature 301, 214-221, 1983

A;Title: Cloning and expression of human tissue-type plasminogen activator cDNA in Esc.

A;Reference number: A93293; MUID:83115262; PMID:6337343
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A;Contents: annotation; melanoma cells, partial sequence of residues 36-562, active ans F;Pohl, 0; Kaplan, L.; Binarsson, M.; Wallen, P.; Jornvall, H.
FEBS Lett. 168, 29-32, 1984
A;Title: Differences between uterine and melanoma forms of tissue plasminogen activato: A;Reference number: A91322; MUID:84158956; PMID:6538514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RiSaëaki, H.; Saito, Y.; Hayashi, M.; Otsuka, K.; Niwa, M.
NuCleic Acids Res. 16, 5655, 1988
A;Title: Nucleotide sequence of the tissue-type plasminogen activator CDNA from human
A;Reference number: S02125; MUID:88262579; PMID:3133640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human tissue plasminogen act
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AjResidues: 1-38,'G',86-433,'E',435-562 <KAG>
AjResidues: 1-38,'G',86-433,'E',435-562 <E1S; ATCC 138
AjEdlund, T.; Ny, T.; Ranby, M.; Heden, L.O.; Palm, G.; Holmgren, E.; Josephson,
Proc. Natl. Acad. Sci. U.S.A. 80, 34-352, 1983
AjTitle: Isolation of cDNA sequences coding for a part of human tissue plasminoge
A,Reference number: A93951; MUID:83169656; PMID:6572897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 31-562 <ITA>
A;Cross-references: DDBJ:D01096; NID:g220128; PIDN:BAA00881.1; PID:g441174
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R;Pohl, G.; Kallstrom, M.; Bergsdorf, N.; Wallen,
Biochemistry 23, 3701-3707, 1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:L00141
A;Experimental source: melanoma cells
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                                                                                                                                                                                                                     A;Molecule type: DNA
A;Residues: 1-562 <NYT>
A;Cross-references: GB:L00141
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A; Residues: 251-358 < EDL>
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A; Residues: 1-562 < DEG>
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A;Residues: 1-562 <PEN>
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Library activator precursor, inactive endothelial splice form - human
Ciplasminogen activator precursor, inactive endothelial splice form - human
Cippecies: Homo sapiens (man)
Cipate: 17-May-1996 #sequence_revision 17-May-1996 #text_change 22-Jun-1999
CiAccession: 138098; S01678
Risiebert P.D.; Fong, K.
Nucleic Acids Res. 18, 1086, 1990
A;Title: Variant tissue type plasminogen activator (PLAT) cDNA obtained from human endot
A;Reference number: 138098; MUID:90192128; PMID:1969145
A;Accession: 138098
A;Actus: translated from GB/EMBL/DDBJ
A;Reference translated from GB/EMBL/DDBJ
A;Reference type: mRNA
A;Residues: 1-291 <SIE>
A;Cross-references: EMBL:X13097; NID:935282; PIDN:CAA31489.1; PID:935283
C;Comment: For the main splice form, see PIR:UKHUT: This form probably does not have prc
C;Genetics:
A;Gene: GDB:PLAT
A;Cross-references: GDB:119496; OMIM:173370
A;Map position: 8plic-8plic
A;Cross-references: Alexander activator; EGF homology; fibronectin type I repeat hom
C;Keyvordes: alternative splicing; fibrinolysis; glycoprotein; kringle
C;Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom
C;Keyvordes: alternative splicing; fibrinolysis; glycoprotein; kringle
F;1-23/Domain: signal sequence #status predicted <SIG>F;24-32/Domain: signal sequence #status predicted <SIG>F;24-120/Domain: fibronectin type I repeat homology <AIPA>
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F;86-119/Domain: fibronectin type I repeat homology <AIPA>
F;86-119/Doma
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F;215-291/Domain: kringle homology #status atypical «KR2»
F;41-71,69-78,86-97,91-108,110-119,127-208,148-190,179-203/Disulfide bonds: #status pred
F;128-209/Domain: kringle homology <RRG>
F;226-471/Domain: trypsin homology <TRY>
F;226-471/Domain: trypsin homology <TRY>
F;42-72,70-79,87-98,92-109,111-120,128-209,149-191,180-204,214-345,257-273,265-334,359-F;185,398/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;225-226/Claeavage site: His-Ser (plasmin) #status predicted
F;227-321,428/Active site: His, Asp, Ser #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
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                                                                                                                                                                                                                                                                                                   47.3%; Score 241; DB 2; Length 477; 50.0%; Pred. No. 1.2e-18; Live 12; Mismatches 30; Indels
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Pred. No. 3.3e-17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          187 SKPWĆÝVIKASKFILEFČSVPVČS 210
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Best Local Similarity
Matches 42; Conserval
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Best Local Similarity
Matches 41; Conserv
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A,Title: Cloning and characterization of a cDNA for rat tissue-type plasminogen activa
A,Reference number: A31597; MUID:89170114; PMID:3148445
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F:38-68.66-75, 38-94, 48-105,107-116,124-205,145-187,126-200,213-294,234-276,265-289,297
F:149,481,181 binding site: carbohydrate (Asn) (covalent) #status predicted
F:308-309/Cleavage site: Arg-Ile (plasmin, trypsin) #status predicted
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A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
A, Residues: 1-379, KV, 381-559 < NWT>
C, Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat 1 C, Reywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
C, Reywords: fibrinolysis; glycoprotein; hydrolase; kringle sequence #status predicted < NGO>
F, 18-29/Domain: propeptide #status predicted < NAT>
F, 38-29/Domain: EGF homology < RGF>
F, 38-75/Domain: EGF homology < RGF>
F, 313-294/Domain: kringle homology < RRI>
F, 313-294/Domain: kringle homology < RRI>
F, 303-559/Product: t-plasminogen activator chain B #status predicted < BCH>
F, 303-559/Product: t-plasminogen activator chain B #status predicted < BCH>
F, 303-559/Product: t-plasminogen activator chain B #status predicted < BCH>
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R;Feng, P.; Ohlsson, M.; Ny, T.
J. Biol. Chem. 265, 2022-2027, 1990
A;Title: The structure of the TATA-less rat tissue-type plasminogen activator gene.
A;Reference number: A35029; MUID:90130448; PMID:2105315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-559 - FEM>
A;Cross-references: GB:M31197; NID:g207429; PIDN:AAA42261.1; PID:g207431; GB:J05226
R;Ny, T.; Leonardsson, G.; Hsueh, A.J.W.
DNA 7; 671-677, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t-plasminogen activator (EC 3.4.21.68) precursor - rat
C,Species: Rattus norvegicus (Norway rat)
C,Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 TCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR
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F;355,404,510/Active site: His, Asp, Ser #status predicted
Pred. No. 6.2e-17;
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; Mismatches
                                                                           9; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
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                     47.78;
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                                                                                41; Conservative
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                Best Local Similarity
Matches 41; Conserv
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A.Contents: annotation; fibrim binding site
R.Contents: annotation; fibrim binding site
R.Contents: annotation; fibrim binding site
R.Contents: annotation; fibrim binding site
R.Contents: annotation; deathification and pharmacokinetic properties of human tissue-type p. A.Title: Isolation, identification and pharmacokinetic properties of human tissue-type p. A.Contents: annotation; novel forms of expressed recombinant t-PA
R.Harris, T.J.R.; Patel, T.; Marston, F.A.O.; Little, S.; Emtage, J.S.; Opdenakker, G.;
R.Harris, T.J.R.; Patel, T.; Marston, F.A.O.; Little, S.; Emtage, J.S.; Opdenakker, G.;
R.J.Title: Cloning of cong for human tissue-type plasminogen activator and its expr
A.Reference number: A54645; MUID:86284200; PMID:3090401
A.Accession: A54645
A.Molecule type: mRNA
A.Residues: 1-562 AHAR>
A.Molecule type: mRNA
A.Residues: 1-562 AHAR>
A.Molecule parts of this sequence were confirmed by peptide sequencing
R.Reddy, V.B.; Garramone, A.J.; Sasak, H.; Wei, C.
DNA 6, 461-472, 1987
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Access-references: GDB:119496; OMIM:173370
Access-references: GDB:119496; OMIM:173370
Access-references: GDB:1122/1; 180/2; 211/1; 268/2; 297/1; 362/2; 408/1; 455/3; 516
Access-reference: 24/3; 39/1; 65/1; 122/1; 180/2; 211/1; 268/2; 297/1; 362/2; 408/1; 455/3; 516
C; Superfamily: tissue plasminogen activator; EGF homology; fibronectin type I repeat hom C; Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; plasma; serine proteinase F; 1-23/Domain: signal sequence #status predicted <a href="Mailto-SEC">Mailto-SEC">Mailto-SEC</a> Product: t-plasminogen activator chain A #status experimental <ACH>F; 33-310/Promain: EGF homology <EGF>F; 33-310/Promain: EGF homology <EGF>F; 372-310/Promain: Kringle homology <EGF>F; 372-26/Domain: kringle homology <EGF>F; 372-26/Domain: kringle homology <EGF>F; 372-26/Domain: kringle homology <EGF>F; 372-26/Domain: kringle homology <EGF>F; 372-26/Domain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle homology <EGF>F; 372-35/Dowain: kringle kringle kringle kringle kringle kringle kringle kring
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F;411-156/Domain: trypsin homology <TRY>
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F;519/Binding site: carbohydrate (Asn) (covalent) #status experimental
F;219/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental
F;310-311/Cleavage site: Arg-11e (plasmin, trypsin) #status experimental
F;357-406/Active site: His, Asp #status predicted
F;513/Active site: Ser #status experimental
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                                                                A, Residues: 33-45,311-320 <POH>
A, Experimental source: uterus
A, Experimental source: uterus
A, Experimental source: uterus
A, Note: in the uterus, clasvage of the activation peptide may also occur after 38-Gln
A, Note: in the uterus, J. Veerman, H.; Pannekoek, H.
J. Biol. Chem. 261, 14214-14218, 1986
A, Reference number: A37567; MUID:87033611; PMID:3021732
A, Contents: annotation, fibrin binding site
R, Verheijen, J. H.; Caspers, M. P. M.; Chang, G. T. G.; de Munk, G. A. W.; Pouwels, P. H.; Enger
EMBO J. 5, 3525-3330, 1986
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C.Comment: Cleavage by plasmin or trypsin produces two chains held together by a single C;Comment: t-PA converts plasminogen to plasmin by hydrolyzing a single Asrg-Val bond. I C;Comment: t-PA binds chain A of fibrin by kringle 2 and the fibronectin type I repeat.
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A, Status: translated from GB/EMBL/DDBJ
A, Status: translated from GB/EMBL/DDBJ
A, Molecule type: mRNA
A, Molecule: 1-562 «RES»
A, Cross-references: GB:M18182; NID:g340176; PIDN:AAA36800.1; PID:g340177
B, Fisher, R.; Waller, E. K.; Grossi, G.; Thompson, D.; Tizard, R.; Schleuning, W.D.
J. Biol. Chem. 260, 11223-11230, 1985
A, Title: Isolation and characterization of the human tissue-type plasminogen activator
A, Reference number: 155232; MUID:85289338; PMID:3161893
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Residues: 1-36 <RE2>
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t-plasminogen activator (EC 3.4.21.68) gamma precursor - common vampire bat N;Alternate names: tissue plasminogen activator C;Specias: Desmodus rotundus (common vampire bat) C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999 C;Accession: JS0600 R;Kraetzschmar, J:; Haendler, B:; Langer, G:; Boidol, W.; Bringmann, P:; Alagon, A.;
                                                                                                                                                                                         Length 562;
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R.; Rickles, R. J.; parraw, A.L.; Strickland, S.
J.; Biol. Chem. 263, 1563-1569; 1988
A. Filtle: Molecular cloning of complementary DNA to mouse tissue plasminogen activator mR A; Recession: A2941; MUID:88087303; PMID:2826484
A; Rocession: A2941; MUID:88087303; PMID:2826484
A; Residues: 1-559 eRIC>
A; Cross-references: GB::03520; NID:g202109; PIDN:AAA40470.1; PID:g202110
Bur. J. Biochem. 224, 865-871, 1934
A; Residues: 1-559 eRIC>
A; Cross-references: GB::03520; MUID:95010076; PMID:7523120
Bur. J. Biochem. 234, 863-871, 1934
A; Reference number: S48202; MUID:95010076; PMID:7523120
A; Recession: S48202
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A; Residues: 33-37, XX, 39-40 cLIJ>
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F;309-553/Domain: trypsin homology <TRY>
F;38-68,66-75,83-94,88-105,107-116,124-205,145-187,176-200,213-294,234-276,265-289,297-4
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:Title: The plasminogen activator family from the salivary gland of the vampire bat ;Reference number: JS0597; MUID:92039036; PMID:1937019
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t-plasminogen activator (EC 3.4.21.68) precursor - mouse
C;Species: Mus musculus (house mouse)
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Pred. No. 2e-16;
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E; 2-47/Product: plasminogen activator alpha-1 #status predicted < PLA>
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E; 2-6-471/Domain: trypsin homology < RGP>
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E; 2-26-471/Domain: standle homology < RGP>
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E; 2-27-273, 2-26 < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < RGP < R
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rikraetzschmar, J.; Haendler, B.; Langer, G.; Boidol, W.; Bringmann, P.; Alagon, A.; Gene 105, 229-237, 1991
A.Titler The plasminogen activator family from the salivary gland of the vampire bat A;Reference number: JS0597; MUID:92039036; PMID:1937019
A;Accession: JS0597
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t-plasminogen activator (EC 3.4.21.68) alpha-1 precursor - common vampire bat NyAlternate names: tissue plasminogen activator (5.5pecies: Desmodus rotundus (common vampire bat)
C.5pecies: Desmodus rotundus (common vampire bat)
C.5pecies: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plasma hyaluronan-binding protein precursor - mouse
C,Species: Mus musculus (house mouse)
C,Date: 11-Mar-1998 #sequence_revision 11-Mar-1998 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR
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F;149,481/Binding site: carbohydrate (Asn) (covalent) #status predicted P;308-309/Cleavage site: Arg-Ile (plasmin, trypsin) #status predicted F;355,404,510/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
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                                                                                                                                                                                                                                                                                                                                                             36; Indels
                                                                                                                                                                                                                                          Length
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46.4%; Pred. No. 1.4e-15;
tive 10; Mismatches 35.
                                                                                                                                                                                                                                    ; Score 219; DB 1;
; Pred. No. 3.6e-16;
11; Mismatches 36
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A;Residues: 1-558 <HAS>
C;Comment: This protein acts as serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 RRPWCYVQVGLKPLVQECMVHDCADGK 88
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A,Molecule type: mRNA
A,Residues: 1-560 < CHO>
A,Cross-references: GB:893182; NID:91836158; PIDN:AAB46909.1; PID:91836159
A,Residues: 1-560 < CHO>
A,Cross-references: GB:893182; NID:91836158; PIDN:AAB46909.1; PID:91836159
A,Experimental source: plasma
A,Note: parts of this sequence, including the amino ends of the mature chains, were det C,Genetics:
A,Gene: GDB:HABP; PHBP; HGFAL
A,Cross-references: GDB:4573962
C,Complex: a disulfide-bonded heterodimer of chains produced from the same precursor; t C,Gomplex: a disulfide-bonded heterodimer of chains produced from the same precursor; t C,Superfamily: plasma hyaluronan-binding protein, BGF homology; kringle homology; trype C,Feywords: chondroitin sulfate proteoglyvan; glycoprotein, hyaluronic acid; hydrolase; F;1-23/Domain: EGF homology < EG3>
F;2-313/Product: plasma hyaluronan-binding protein, 50K chain #status predicted <50K>
F;71-108/Domain: EGF homology < EG3>
F;71-108/Domain: kringle homology < RG3>
F;15-115-147/Domain: kringle homology < TRY>
F;114-550/Domain: trypsin homology < TRY>
F;14-556/Domain: trypsin homology < TRY>
F;14-556/Domain: trypsin homology < RG3>
F;54,207/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;77-88,82-97,99-108,115-125,120-136,138-147,154-165,159-176,178-187,194-276,215-257,24
F;362,405,509/Active site: His, Asp, Ser #status predicted
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C;Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homology
C;Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homology
C;Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homology < F;1-34/Domain: signal sequence #status predicted < SIG>
F;108-148/Domain: EGF homology < EGI>
F;202-237/Domain: EGF homology < EGI>
F;245-278/Domain: EGF homology < EGS>
F;245-278/Domain: Kringle homology < KRG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Miyazawa, K.; Shimomura, T.; Kitamura, A.; Kondo, J.; Morimoto, Y.; Kitamura, N.
J. Biol. Chem. 268, 10024-10028, 1993
A;Title: Molecular cloning and sequence analysis of the cDNA for a human serine proteas
Purification and characterization of a novel hyaluronan-binding protein (PHBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,Cross-references: DDBJ:D14012; NID:g219680; PIDN:BAA03113.1; PID:g219681
A,Experimental source liver (mRNA); serum (protein)
A,Note: sequence extracted from NCB1 backbone (NCBIN:131227, NCBIP:131228)
A,Note: parts of the sequence, including the amino ends of the heavy and light chains,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C,Function:
A,Description: activates hepatocyte growth factor by specific proteclytic cleavage
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
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A,Reference number: A46688; MUID:93252878; PMID:7683665
A,Accession: A46688
A,Molecule type: mRNA
A,Residues: 1-655 <MIY>
                                                                              A; Reference number: JC4795; MUID:96425001; PMID:8827452
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Best Local Similarity 41.7%; Pred. No. 2.2e-13;
Matches 35; Conservative 15; Mismatches 33;
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A;Cross-references: GDB:9954514
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NyAlternate names: uPA
C;Species: Gallus gallus (chicken)
C;Species: Gallus gallus (chicken)
C;Species: Gallus gallus (chicken)
C;Accession: A35005
R;Leslie, N.D.; Kessler, C.A.; Bell, S.M.; Degen, J.L.
J; Biol. Chem. 265, 1339-1344, 1990
A;Title: The chicken urokinase-type plasminogen activator gene.
A;Recession: A35005; MUID:90110185; PMID:2295632
A;Recession: A35005
A;Recession: A35005
A;Recession: A35005
A;Recession: A35005
A;Recession: A35005
C;Guperfaminary
A;Nolecule type: mRMA
A;Residues: 1-434 cLBS
A;Accession: A35005
C;Guperfamily: urokinase-type plasminogen activator; EGF homology; kringle homology; try
C;Reywords: glycoproctein; heterodimer; hydrolase; kringle; serine proteinase
F;1-21/Domain: signal sequence #status predicted cSIG>
F;2-171/Porduct: urokinase-type plasminogen activator chain A #status predicted cACH>
F;0-118/Domain: EGF homology cRGS>
F;79-158/Domain: kringle homology cRGS>
F;79-158/Domain: kringle homology cRGS>
    C;Superfamily: plasma hyaluronan-binding protein; EGF homology; kringle homology; tryps; F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-31/Product: plasma hyaluronan-binding protein large chain #status predicted <MATL>
F;24-31/Product: plasma hyaluronan-binding protein large chain #status predicted <MATL>
F;75-106/Domain: EGF homology <EG2>
F;113-145/Domain: EGF homology <EG3>
F;125-185/Domain: EGF homology <EG3>
F;192-274/Domain: kringle homology <KR1>
F;312-558/Product: plasma hyaluronan-binding protein small chain #status predicted <MATS
F;312-558/Domain: trypsin homology <TRY>
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plasma hyaluronan-binding protein precursor - human
N.Alternate names: hepatocyte growth factor activator-like protein; PHBP
N.Alternate names: hepatocyte growth factor activator-like protein; PHBP
N.Alternate names: hepatocyte growth factor
Speciew: serine proteinase (EC 3.4.21.-)
C;Speciew: Homo sapiens (man)
C;Deciew: Homo sapiens (man)
C;Deciew: 15-0c-1995 #sequence_revision 16-Aug-1996 #text_change 19-Jul-2002
C;Accession: JC4795
R;Choi-Miura, N.H.; Tobe, T.; Sumiya, J.; Nakano, Y.; Sano, Y.; Mazda, T.; Tomita, M.
J. Biochem. 119, 1157-1165, 1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
41.1%; Score 209.5; DB 2;
Best Local Similarity 45.8%; Pred. No. 3.9e-15;
Matches 38; Conservative 13; Mismatches 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          252 KPWCFVKVNSEKVKWEYCDVTVC 274
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Best Local S
Matches 37
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R;McMullen, B.A.; Fujikawa, K.
N. Biol. Chem. 260, 5328-5341, 1985
A;Title: Amino acid sequence of the heavy chain of human alpha-factor XIIa (activated )
A;Reference number: A22248; MUID:85182674; PMID:3886654
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A,Residues: 354-362;373-615 <FUJ>
R;Harris, R.J.; Ling, V.T.; Spellman, M.W.
J. Biol. Chem. 267, 5102-5107, 1992
A,Title: O-linked fucose is present in the first epidermal growth factor domain of fact
A,Reference number: A44606; MUID:92184750; PMID:1544894
                                                                                                                                                                                                                                                                        A;Cross-references: GB:M31315; NID:g182291; PIDN:AAA70225.1; PID:g182292
R;Cool, D.E.; Edgell, C.J.S.; Louie, G.V.; Zoller, M.J.; Brayer, G.D.; MacGillivray, R. Biol. Chem. 260, 13666-13676, 1985
A;Title: Characterization of human blood coagulation factor XII cDNA. Prediction of the A;Reference number: A00930; MUID:86033830; PMID:3877053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Pathway: blood coagulation; fibrinolysis
C;Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homolog;
C;Reywords: blood coagulation; fibrinolysis; glycoprotein; hydrolase; kringle; plasma;
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-372,373-615/Product: coagulation factor XIIa, alpha form #status experimental <AI:
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F;98-130/Domain: BGF homology < EG1>
F;135-170/Domain: BGF homology < EG2>
F;178-209/Domain: BGF homology < EG2>
F;217-255/Domain: KGF homology < KRG>
F;217-255/Domain: Kingle homology < KRG>
F;258-355/Kegion: proline-rich
F;354-362,373-615/Product: coagulation factor XIIa, beta form #status experimental <B1:
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A;Map position: 5GJ4-5Gfer
A;Introns: 19/3; 39/1; 72/2; 96/1; 133/1; 177/1; 212/1; 267/2; 340/1; 417/2; 463/1; 51:
C;Complex: factor XII, prekallikrein, and HMW kininogen form a complex bound to anioni
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for human factor XII (Hageman factor). PMID:3011063
                                       A;Title: cDNA sequence coding for human coagulation factor XII (Hageman). A;Reference number: A26814; MUID:86176794; PMID:3754331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , Molecule type: mRNA
, Residues: 146-378, 'G', 380-615 <QUE>
, Cross-references: GB:M13147; NID:g180360; PIDN:AAA70224.1; PID:g180361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 14-332,'S',334-615 <CO2>
A;Cross-references: GB:M11723; NID:g180358; PIDN:AAA51986.1; PID:g180359
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A,Residues: 20-379 <MCM>
R,Fujikawa, K.; McMullen, B.A.
Biol. Chem. 258, 10924-10933, 1983
A,Title: Amino acid sequence of human beta-factor XIIa.
A,Reference number: A21037; MUID:83291041; PMID:6604055
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Pred. No. 7.9e-11;
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Biochemistry 25, 1525-1528, 1986
A.fittle: A. Coling
A.Reference number: A25191; MUID:86216049;
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Nucleic Acids Res. 14, 3146, 1986
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Best Local Similarity
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A; Residues: 4-615 <TRI>
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                                                                                                                                                A;Accession: A26814
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C.) Date: 25-Feb-1994 #sequence_revision 03-Aug-1995 #text_change 21-Jan-2000
C.) Accession: S28941
R.) Semba, U.; Yamamoror, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
R.) Semba, U.; Yamamoror, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
R.) Semba, U.; Yamamoror, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
R.) Semba, U.; Yamamoror, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
R.) Semba, U.; Yamamoror, T.; Kunisada, T.; Shibuya, Y.; Tanase, S.; Kambara, T.; Okabe, H.
R.) Reference number: S28941; MUD:93003367; PMID:1390917
A, Reference number: S28941; MUD:93003367; PMID:1390917
A, Status: prelluminary
A, Reference number: S28941; MUD:93003367; PMID:1390917
A, Status: prelluminary
A, Reference number: SEBL:X68615; NID:949578; PIDN:CAA48600.1; PID:949579
C, Superfamily: coagulation factor XII; EGF homology; fibronectin type I repeat homology (FF)
F, 134-169/Domain: fibronectin type I repeat homology (FB)>
F, 174-208/Domain: EGF homology (KRG)>
F, 174-208/Domain: EGF homology (KRG)>
F, 1559-597/Domain: trypsin homology (RRY)>
F;373-407/Product: hepatocyte growth factor activator light chain #status experimental < F;408-655/Product: hepatocyte growth factor activator heavy chain #status experimental < F;408-641/Domain: trypsin homology <TRX:
F;408-641/Domain: trypsin homology <TRX:
F;408-641/Domain: trypsin homology <TRX:
Carbohydrate (Asn) (covalent) #status predicted  F;164-175,169-186,188-197,202-230,228-237,245-256,250-267,269-278,286-367,307-349,338-36  F;447,497,598/Active site: His, Asp, Ser #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                       26; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.4%; Score 180.5; DB 2;
42.9%; Pred. No. 6.2e-12;
live 11; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                        37.8%; Score 193; DB 1;
54.5%; Pred. No. 2.9e-13;
tive 4; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DTRPWCFVWMGNRLSWEYCDLAQC 294
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Best Local Similarity 42.9%
Matches 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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Best Local Similarity
Best Tocal 36; Conserve
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DB 1; Length 615;

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A; McGeule type: mRNA
A; Residues: 1-4548 (ACL).
A; Residues: 1-4548 (ACL).
A; Residues: 1-4548 (ACL).
A; Residues: 1-4548 (ACL).
A; Cross-references: 1-4548 (ACL).
A; Cross-references: 1-4548 (ACL).
B; Eaton, D.L.; Fless, G.M.; Kohr, W.J.; McLean, J.W.; Xu, Q.T.; Miller, C.G.; Lawn, R.M.
B; Eaton, D.L.; Pless, G.M.; Kohr, W.J.; McLean, J.W.; Xu, Q.T.; Miller, C.G.; Lawn, R.M.
A; Title: Partial amino acid sequence of apolipoprotein(a) shows that it is homologous the A; Reference number: A28017
A; Molecule type: protein
A; Molecule type: protein
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"Title: Characterization by yeast artificial chromosome cloning of the linked apolipop, Reference number: A47233; MUID:9308753; PMID:94851

"Accession: 160906
                                                                                                                                                                                                                                                                                                                                                                                                                                                               apoprotein(a) (EC 3.4.21.-) precursor [validated] - human N.Alternate names: apolipoprotein(a); lipoprotein(a) chain apo(a) C;Species: Homo sapiens (man) c;Species: Homo sapiens (man) c;Species: Ac Jun-1989 #sequence revision 30-Jun-1989 #text_change 08-Dec-2000 C;Accession: 30-Oun-1989 #x217; 160906; A4723; I52415; I55286 R;McLean, J.W.; Tomlinson, J.E.; Kuang, W.J.; Baton, D.L.; Chen, E.Y.; Fless, G Nature 330, 132-137, 1987 A;Atitle: CDNA sequence of human apolipoprotein(a) is homologous to plasminogen. A;Reference number: S00657; MoID:88039109; PMID:3670400
                                                                                                                            A;Status: preliminary; translation not shown; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-16 <RE5>
                                                                  3 CYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDAL-----QLGLGKHNYCRN
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A;Cross-references: GB:M90078; NID:g178786; PIDN:AAA35547.1; PID:g553188
A;Note: apo(a) gene 1 (nomenclature of reference I52415)
A;Accession: A47233
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A;Note: apo(a) gene 1 (nomenclature of reference 152415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M86878; NID:g178782; PIDN:AAA51749.1; PID:g553186
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18;
   Indels
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A;Residues: 1-16 <RES>
A;Cross-references: GB:L07899; NID:g967973; PID:g967974
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A;Molecule type: DNA
A;Residues: 1-16 <RE4>
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                                                                                                                                                                                                                                                                                                   PDADKSPWCYT---TDPSVRWEFCNLRKCLD 116
                                                                                                                                                                                                                             86
       Mismatches
                                                                                                                                                                                                                                 58 PDNRRRPWCYVQVGLKPLV--QECMVHDCAD
       7;
           Conservative
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A: Residues: 1-16 < RE3>
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           36;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      apolipoprotein(a) (EC 3.4.21.-) - rhesus macaque (fragment)
C; Species: Macaca mulatta (rhesus macaque)
C; Species: Macaca mulatta (rhesus macaque)
C; Date: 22-Nov-1989 Heequence_revision 22-Nov-1989 #text_change 22-Jun-1999
C; Accession: A32869; A30848
R; Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
J. Biol. Chem. 264, 2857-5865, 1989
A; Title: Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of synthesis.
A; Reference number: A32869; MUID:89174660; PMID:2925643
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                   5
                                                                                                                                                   216 SCYDGRGLSYRGLARTILSGAPCQPWAS----EATYRNVTAEGARNWGLGGHAFCRNPDN 271
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NyAlternate names: plasminogen
C;Species: Canis lupus familiaris (dog)
C;Accession: E61545
R;Schaller, J.; Rickli, B.E.
Enzyme 40, 63-69, 1988
A;Title: Structural aspects of the plasminogen of various species.
A;Reference number: A61545; MuID:89005015; PMID:3168975
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                                                                                 2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDN
                       Gaps
                   5;
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31.6%; Score 161; DB 2; Length 1420;
Best Local Similarity 40.9%; Pred. No. 1.9e-09;
Matches 36; Conservative 9; Mismatches 31; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 120;
                       Indels
                       24;
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                       Mismatches
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C;Keywords: hydrolase; serine proteinase
F;37-114/Domain: kringle homology <KR4>
                           . 9
                       Conservative
                                                                                                                                                                                                                                                                                                                   272 DIRPWCFV 279
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A,Molecule type: protein
A,Residues: 1-120 <SCH>
                                                                                                                                                                                                                                                 61 RRRPWCYV 68
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                                   33;
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                                   Matches
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A)Cross-references: GB:S70164
A)Note: the authors translated the codon GAG for residue 23 as Val, GAG for residue 70
A)Note: the authors translated the codon GAG for residue 247 as Leu, CCG for residue 286 as C
is, and ATC for residue 505 as Leu
R;Fujikawa, K.; Walsh, K.A.; Davie, E.W.
Biochemistry 16, 2270-2278, 1977
A;Title: Isolation and characterization of bovine factor XII (Hageman factor).
A;Reference number: A61329; MUID:77182112; PMID:861210
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F;6-83,27-66,55-78/Disulfide bonds: #status predicted
F;8-83,27-66,55-78/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                        A, Molecule type: protein
A, Residues: 10-16, 'X', 18-19,525-550 <FUJ>
A, Residues: 10-16, 'X', 18-19,525-550 <FUJ>
B, Residues: 10-16, 'X', 18-19,525-550 <FUJ>
C, Superframily: coagulation factor XII: BGF homology; fibronectin type I repeat homology
C, Keywords: blood coagulation; fibrinolysis; glycoprotein; hydrolage; monomer; plasma;
F; 37-78/Domain: fibronectin type II repeat homology <FEL>
F; 88-120/Domain: fibronectin type I repeat homology <FEL>
F; 125-160/Domain: fibronectin type I repeat homology <FRI>
F; 207-287/Domain: fibronectin type I repeat homology <FRI>
F; 207-287/Domain: trypsin homology <FRI>
F; 341/Active site: Ser #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28
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C;Date: 22-Jan-1993 #sequence_revision 22-Jan-1993 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCYE -- GNGHFYRGKASTDTMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNP
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Biochim. Biophys. Acta 832, 326-330, 1985
A.Titler: The Kringle 4 domain of chicken plasminogen.
A.Reference number: A60140, MUID:86077796, PMID:4074753
A; Reference number: S45281; MUID: 94242782; PMID: 8186251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 155.5; DB 2;
Pred. No. 3.3e-09;
9; Mismatches 37;
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Best Local Similarity 38.6%; Pred. No. 1e-09;
Matches 34; Conservative 7; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   olasmin (BC 3.4.21.7) precursor - chicken (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plasmin (EC 3.4.21.7) precursor - goat (fragments)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRSPWCYT - - - TDPSVRWEYCNLKRCSD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 33; Conserv
                                A, Accession: S45281
A, Molecule type: mRNA
A, Residues: 1-593 <SHI>
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                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: A61329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession: A60140
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                                                                               A,COSS TELEGREGES: UNDILLIANDED; UNILLIANDED.
A,MBD position: 6q26-6q27
A,Note: several genes closely linked on chromosome 6 are identical in the first coding of Kingle repeats of the first properties; C,Superfamily: apolipoprotein(a); kringle homology; trypsin homology
C,Superfamily: apolipoprotein(a); kringle homology; trypsin homology
C,Superfamily: apolipoprotein(a) #status sperimental <MAT>
C,Superds: hydrolaes; kringle; lipid binding; lipoprotein; serine proteinase
F;119/Domain: signal sequence #status experimental <MAT>
F;142-19/Domain: kringle homology <KR2>
F;142-19/Domain: kringle homology <KR3>
F;143-19/Domain: kringle homology <KR4>
F;144-10/Domain: kringle homology <KR3>
F;148-11/Domain: kringle homology <KR3>
F;148-11/Domain: kringle homology <KR1>
F;148-11/Domain: kringle homology <KR1>
F;148-11/Domain: kringle homology <KR1>
F;148-11/Domain: kringle homology <KR1>
F;148-11/Domain: kringle homology <KR1>
F;148-11/Domain: kringle homology <KR1>
F;158-11/Domain: kringle homology <KR1>
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F;108-11/Domain: kringle homology <KR2>
F;108-11/Domain: kringle homology <KR2>
F;108-1249/Domain: kringle homology <KR2>
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F;214-2249/Domain: kringle homology <KR2>
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F;224-2249/Domain: kringle homology <KR2>
F;224-2249/Domain: kringle homology <KR2>
F;224-2249/Domain: kringle homology <KR2>
F;224-2499/Domain: kringle homology <KR2>
F;224-2499/Domain: kringle homology <KR2>
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Coagulation factor XIIa (EC 3.4.21.38) precursor - bovine (fragment)

Coagulation factor XIIa (EC 3.4.21.38) precursor - bovine (fragment)

Coagulation and the procession of actile)

Cibate: 10-Apr-1995 #sequence_revision 22-Apr-1995 #text_change 21-Jan-2000

Cibate: 10-Apr-1995 #sequence_revision 22-Apr-1995 #text_change 21-Jan-2000

Cibates S4581, Acida 1309

Ribhibuya, Y: Semba, U: Okabe, H:; Kambara, T:; Yamamoto, T.

Biochim. Biophys. Acta 1206, 63-70, 1994

A;Title: Primary structure of bovine Hageman factor (blood coagulation factor XII): comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1122 RQCYHGNGQSYRGTFSTTVTGRTCQSWSSMTPHRHQRTPENYPNDGLTM----NYCRNP 4176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KTCYEGNGHFYRGKASTDIMGRPCLPWNSAIV -- LOOIYHAHRSDALQLGLGKHNYCRNP 58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          < KR31>
                                                              A;Cross-references: GDB:120699; OMIM:152200
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F;3562-3639/Domain: k
F;3676-3753/Domain: k
F;3782-3859/Domain: k
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F;2878-2955/Domain:
F;2992-3069/Domain:
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F;3220-3297/Domain:
F;3334-3411/Domain:
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F;4228-4307/Domain:
F;4328-4541/Domain:
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A,Description: dissolves the fibrin of blood clots, acts as a proteolytic factor in a v ns the walls of the graafian follicle, also activates the urokinase-type plasminogen ac A;Description: dissolves the fibrinolysis
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homolog C;Keywords: duplication; fibrinolysis; glycoprotein; hydrolase; kidney; kringle; plasma F;1-26/Domain: splasminogen-related protein precursor homology <PLPH>
F;27-812/Product: plasminogen-related protein precursor homology <PLPH>
F;27-812/Product: plasminogen-related protein precursor homology <PLPH>
F;27-812/Product: plasminogen-sperimental <PRO>
F;27-103/Domain: activation peptide #status experimental <ART>
F;104-583/Domain: activation peptide #status experimental <ART>
F;104-583/Domain: kringle homology <KR1>
F;192-269/Domain: kringle homology <KR2>
F;88-4461/Domain: kringle homology <KR3>
F;88-4461/Domain: kringle homology <KR5>
F;88-84-812/Domain: kringle homology <KR5>
F;88-84-812/Domain: kringle homology <KR5>
F;88-84-812/Domain: kringle homology <KR5>
F;88-84-812/Domain: kringle homology <KR5>
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F;88-84-812/Domain: kringle homology <KR5>
F;88-84-812/Domain: kringle homology <KR5-5
F;88-86-80 &Domain: kringle homology <KR5-5
F;88-80 &Domain: kringle homology <KR5-5
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F;88-80 &Domain: kringle homology <KR5-5
F;88-80 &Domain: kringle homology <KR5-5
F;88-80 &
                                                                                                                                                                                                                             A.Note: it is uncertain whether Met-1 or Met-8 is the initiator
R;Schaller, J.; Moser, P.W.; Dannegger-Muller, G.A.K.; Rosselet, S.J.; Kampfer, U.; Ric.
Bix. J. Biochem. 149, 267-278, 1985
A;Title: Complete amino acid sequence of bovine plasminogen. Comparison with human plasma, A;Reference number: A2835; MUID:85203906; PMID:3846532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 deoxyribonucleic acid coding for human and
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C;Species: Erinaceus europaeus (western European hedgehog)
C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 CYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAH----RSDALQLGLGKHNYCRNPD
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                                                                                                                                                              A,Cross-references: EMBL:X79402; NID:g494962; PIDN:CAA55939.1; PID:g494963
A,Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32; Indels 14; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
29.2%; Score 149; DB 1; Length 812;
Best Local Similarity 39.3%; Pred. No. 2.3e-08;
Matches 35; Conservative 8; Mismatches 32; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: protein
A; Residues: 27-334, D'. 336-515, 'H', 517-554, 'L', 556-812 < SCH>
R; Mallnowski, D.P.; Sadler, J.E.; Davie, E.W.
Biochemistry 23, 4243-4250, 1984
A; Title: Characterization of a complementary deoxyribonuclei
A; Reference number: 145961; MUID: 85023311; PMID: 6148961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F;624,667,762/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : | | | : | : | : | 438 ADKSPWCYT---TDPRVRWEFCNLKKCSE 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60 NRRRPWCYVQVGLKPLV--QECMVHDCAD 86
        Reference number: S45046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: protein A; Residues: 27-83 < BRU>
                                                                                       A; Molecule type: mRNA
A; Residues: 1-812 < BER>
                                                      A; Accession: S45046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Function:
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A;Molecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Cross-references: GB:M62832; NID:g206215; PIDN:AAA41884.1; PID:g554488
A;Note: the authors translated the codon TCT for residue 76 as Ala
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C;Superfamily: plasmin; kringle homology plasminogen; kringle; serine proteinase
F;34-112,Domain: kringle homology < KRG>
F;34-112,55-95,83-107/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-123 <SCH>
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C;Keywords: hydrolase; serine proteinase
F;41-118/Domain: kringle homology <KR4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     plasmin (EC 3.4.21.7) precursor - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Species: Partus norvegicus (Norway rat)
C;Date: 28-Feb-1992 #sequence_revision 17-Apr-1993 #text_change 16-Jul-1999
C;Accession: A40522
R;Kanalas, J.J.; Makker, S.P.
R;Kanalas, J.J.; Makker, S.P.
A;Title: Identification of the rat Heymann nephritis autoantigen (GP330) as a receptor A;Reference number: A40522; MUID:91250378; PMID:1645711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 CYHGNGQSYRGTSSTTVTGRKCQSWSSMIPHRHQKTPESYPNAGLTM-----NYCRNPDA 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plasmin (BC 3.4.21.7) precursor - bovine
NyAlternate names: plasminogen
C;Species: Bos primingenius taurus (cattle)
C;Species: Bos primingenius taurus (cattle)
C;Date: 30-Sep-1987 #sequence revision 28-Apr-1995 #text_change 18-Jun-1999
C;Accession: S45046; A25835; Ī45561; S03736
R;Berglund, L.; Andersen, M. D.; Petersen, T. E.
Submitted to the EMBL Data Library, May 1994
A;Description: Cloning and characterizatin of the bovine plasminogen cDNA.
N;Alternate names: plasminogen
C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 28-0ct-1994 #sequence_revision 28-0ct-1994 #text_change 12-May-1995
C;Accession: C61545
R;Schaller, J; Rickli, E.E.
Enzyme 40, 63-69, 1988
A;Title: Structural aspects of the plasminogen of various species.
A;Reference number: A61545; MUID:89005015; PMID:3168975
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 150; DB 2 Pred. No. 3e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29.4%; Scc. No. 5c. 37.5%; Pred. No. 5c. 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | : | | | : | : | : | : | : | NDQRGPWCFT---TDPSVRWEYCNLKRCSE 114
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Best Local Similarity 37.5%
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Best Local Similarity
Matches 34; Conserv
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C; Accession: 146260
K; Lawn, R.M.; Boonmark, N.W.; Schwartz, K.; Lindahl, G.E.; Wade, D.P.; Byrne, C.D.; Fong J. Biol. Chem. 270, 24040-2409, 1995
A; Title: The recurring evolution of Lp(a): Insights from cloning of hedgehog apolipoprot A; Reference number: 146259; MUID:96025778; PMID:7592597
A; Accession: 146260
A; Actaus: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-810 cLAWA
A; Residues: 1-810 cLAWA
A; Residues: 1-810 cLAWA
A; Coss-references: EMBL:03371; NID:91046360; PID:91046361
C; Reywords: hydrolase; serine proteinase
F; 1-96/Domain: plasmingen-related protein precursor homology cKR2>
F; 185-262/Domain: kringle homology cKR2>
F; 185-262/Domain: kringle homology cKR3>
F; 275-352/Domain: kringle homology cKR4>
F; 882-561/Domain: kringle homology cKR4>
F; 882-561/Domain: kringle homology cKR4>
F; 882-561/Domain: kringle homology cKR5>
F; 882-803/Domain: trypsin homology cKR5>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 CYEGNGHFYRGKASIDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.1%; Score 148.5; DB 2; Length 810; 41.5%; Pred. No. 2.6e-08; Indels 3; ive 7; Mismatches 28; Indels 3;
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Best Local Similarity 41.5
Matches 27; Conservative
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OM protein - protein search, using sw model

ω, December

2003, 14:33:53 ; Search time 2.82759 Seconds (without alignments) 1463.563 Million cell updates/sec

US-09-880-503-1 Title:

Perfect score:

510 1 KTCYEGNGHFYRGKASTDIM.....QVGLKPLVQECMVHDCADGK 88 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 seqs, 47026705 residues

Searched:

127863 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_41:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

DB ID Description	UROK HUMAN P00749 homo	UROK PAPCI UROK PIG	UROK RAT P29598 ratt	TROK BOVIN	UROK_MOUSE P06869	URTB_DESRO P98121 desm	URT2_DESRO	TPA_HUMAN	TPA_RAT P19637	URIG_DESRO P49150 desm	TPA_MOUSE P11214	URT1_DESRO P98119 desm	TPA_BOVIN Q28198	UROK_CHICK	HGFA_HUMAN Q04756	HGFA_MOUSE Q9r098	FA12_CAVPO Q04962	FA12_HUMAN P00748	APOA_MACMU P14417	KRM1_MOUSE	KRM1_RAT	XENLA Q90y90	HUMAN Q96mu8	HUMAN P08519	SOVIN	Q01177 ratt	NIAC	200	HUMAN QBncw0 homo	Q8ncw0 homo	HIMAN (880cW) homo capital SRIBU (229485 erinaceus PIG P06867 sus scroff
1 UROK 1 UROK 1 UROK 1 UROK 1 UROK 1 TPA 1 TPA 1 TPA 1 TPA 1 TPA 1 TPA 1 TPA 1 TPA 1 TPA 1 TR						яннаннаннаннаннаннаннаннаннаннаннаннанна	а а а а а а а а а а а а а а					ਜ਼ਿਜ਼ਜ਼ਜ਼ਜ਼ਜ਼ਜ਼ਜ਼ਜ਼	ааааааааа	аниннанен	наннанне	ааааааа	аааааа	1 APOA 1 KRM1 1 KRM1 1 KRM1 1 KRM1 1 APOA	1 KRM1 1 KRM1 1 KRM1 1 KRM1 1 APOA	1 KRM1 1 KRM1 1 KRM1 1 APOA	1 KRM1 1 KRM1 1 APOA	1 KRM1	1		3 1 FA12	9 1	2 1 PLMN	2 1 KRM2	0 1 PLMN		0 1 PLMN
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Q8k1s7 mus musculu Q01973 homo sapien Q9z139 mus musculu P00747 homo sapien P26927 homo sapien P80009 canis famil P12545 macaca mula Q24488 drosophila Q08048 mus musculu	P1/945 ractus norv P14210 homo sapien	P26928 mus musculu
KRM2_MOUSE ROR1_HUMAN ROR1_HUMAN HOFIL_HUMAN HGFIL_HUMAN PLIMN_CANFA PLIMN_MACMU FORRI DROME HGF DROME	HGF_HUMAN	HGFL_MOUSE
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461 937 937 711 333 810 685 728	728	716
22 28 8 . 7 . 2 . 2 . 3 . 6 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2	26.6	25.9
146.5 146 146 142.5 141 141 139	135.5	132
4 2 2 2 2 2 3 3 3 3 3 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5	4 4 2 4	45

## ALIGNMENTS

RESI	RESULT 1
UROI	UROK HUMAN
ΩI	UROK HUMAN STANDARD; PRT; 431 AA.
AC	P00749; Q15844; Q16618; Q969W6;
υŢ	21-JUL-1986 (Rel. 01, Created)
DŢ	20-MAR-1987 (Rel. 04, Last sequence update)
DŢ	15-SEP-2003 (Rel. 42, Last annotation update)
DE	Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
DE	(U-plasminogen activator).
Ü	PLAU.
SO	Homo sapiens (Human).
ပ္ပ	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
ပ္ပ	Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
ŏ	NCBI TaxID=9606;
RN	[1]
ጸክ	SEQUENCE FROM N.A.
RX	MEDLINE=85215647; PubMed=2987867;
RA	Riccio A., Grimaldi G., Verde P., Sebastio G., Boast S., Blasi F.;
RŢ	"The human urokinase-plasminogen activator gene and its promoter.";
Ę,	Nucleic Acids Res. 13:2759-2771(1985).
RN	[2]

L2)
HOLMES W.E., Pennica D., Blaber M., Rey M.W., Guenzler W.A.,
Steffens G.J., Heyneker H.L.;
"Cloning and expression of the gene for pro-urokinase in Escherichia

MEDILINE=8665694; PubMed=2415429; Nagai M., Hiramatsu R., Kaneda T., Hayasuke N., Arimura H., Nishida M., Suyama T.; "Molecular cloning of CDNA coding for human preprourokinase."; Gene 36:183-188(1985). SEQUENCE FROM N.A.

Biotechnology 3:923-929(1985).

MEDLINE=85203359; PubMed=3888571;
MEDLINE=85203359; PubMed=3888571;
Macobs P., Cravador A., Loriau R., Brockly F., Colau B., Chuchana P., van Elsen A., Herzog A., Bollen A.;
"Molecular cloning, sequencing, and expression in Escherichia coli of human preprourokinase cDNA.";
DNA 4:139-146(1985).
[5]
SEQUENCE FROM N.A.
Rieder M.J., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q., Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases. 

SEQUENCE FROM N.A.

TISSUE=Lung;
MEDLINE=22388257; PubMed=12477932;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

```
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.M.,
Nilalon D.K., Munry D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Mitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Grem E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
T. "Generation and initial analysis of more than 15,000 full-length
T. Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20266327; PubMed=10805774;
Sperl S., Jacob U., Arroyo de Prada N., Sturzebecher J., Wilhelm O.G.,
Bode W., Magdolen V., Huber R., Moroder L.;
"(4-aminomethyl)phenylguanidine derivatives as nonpeptidic highly
selective inhibitors of human urokinase.";
Proc. Natl. Acad. Sci. U.S.A. 97:5113-5118(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Human low-molecular-weight urinary urokinase. Partial characterization and preliminary sequence data of the two polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oswald R.E., Bogusky M.J., Bamberger M., Smith R.A.G., Dobson C.M.; "Dynamics of the multidomain fibrinolytic protein urokinase from two-
                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-84272706; PubMed-6589620;
Verde P., Stoppelli M.P., Galeffi P., di Nocera P., Blasi F.;
"Identification and primary sequence of an unspliced human urokinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The primary structure of high molecular mass urokinase from human urine. The complete amino acid sequence of the A chain."; Hoppe-Seyler's Z. Physiol. Chem. 363:1155-1165(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-83055099, PubMed-6754572;
Steffens G.J., Gunzler W.A., Otting F., Frankus E., Flohe L.;
"The complete amino acid sequence of low molecular mass urokinase
from human urine.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
MEDLINE=96000858; PubMed=8591045;
Spraggon G., Phillips C., Nowak U.K., Ponting C.P., Saunders D.,
Dobson C.M., Stuart D.I., Jones E.Y.;
"The crystal structure of the catalytic domain of human
urokinase-type plasminogen activator.";
Structure 3:681-691(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 21-177.
MEDLINE=83055084; PubMed=6754569;
Gunzler W.A., Steffens G.J., Otting F., Kim S.-M.A., Frankus E.,
Flohe L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 156-176 AND 179-224.
MEDLINE=83003608; PubMed=6749491;
Schaller J., Nick H., Rickli E.E., Gillessen D., Lergier W.,
Studer R.O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hoppe-Seyler's Z. Physiol. Chem. 363:1043-1058(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                         ooly(A) + RNA.";
Proc. Natl. Acad. Sci. U.S.A. 81:4727-4731(1984).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eur. J. Biochem. 125:251-257(1982)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRUCTURE BY NWR OF 67-155.
MEDLINE=93003110; PubMed=1327118;
Li X., Smith R.A.G., Dobson C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRUCTURE BY NMR. MEDLINE=89127526; PubMed=2536903;
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 66-431 FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -I. CATALYTIC ACTUINTY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- GURDINIT: FOUND IN HIGH AND LOW MOLECULAR MASS FORMS. EACH CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 155 IN THE LOW MOLECULAR MASS FORM TO YIELD A SHOFT AI CHAIN.
-!- PHARMACEUTICAL: Available under the name Abbokinase (Abbott). Used in Pulmonary Embolism (PE) to initiates fibrinolysis.
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                            VARIANT LEU-141.
MEDLINE=96186279; PubMed=8652631;
Yoshimoto M., Ushiyama Y., Sakai M., Tamaki S., Hara H., Takahashi K., Sawasaki Y., Hanada K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Turkmen B., Schmitt M., Schmalfeldt B., Trommler P., Hell W.,
Creutzburg S., Graeff H., Magdolen V.;
"Mutational analysis of the genes encoding urokinase-type plasminogen
activator (upA) and its inhibitor PAI-1 in advanced ovarian cancer.";
Electrophoresis 18:686-689 (1997).
-!- FUNCTION: POTENT PLASMINOGEN ACTIVATOR AND IS CLINICALLY USED FOR
THERARY OF THROMBOLYTIC DISORDERS.
"Sequential 1H NMR assignments and secondary structure of the kringle domain from urokinase.";
Biochemistry 31:9562-9571(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conne B., Berczy M., Belin D.; "Detection of polymorphisms in the human urokinase-type plasminogen
                                                                                                                                          STRUCTURE BY NWR OF 67-155.
MEDIADE=94149701, PubMed=8107091,
Li X., Bokman A.M., Lilinas M., Smith R.A.G., Dobson C.M.;
"Solution structure of the kringle domain from urokinase-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Characterization of single chain urokinase-type plasminogen activator with a novel amino-acid substitution in the kringle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochim. Biophys. Acta 1293:83-89(1996).
                                                                                                                                                                                                                                                                                  plasminogen activator.";
J. Mol. Biol. 235:1548-1559(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conne B., Berczy M., Belin D.;
Thromb. Haemost. 78:973-973(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    activator gene.";
Thromb. Haemost. 77:434-435(1997)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=97337920; PubMed=9194591;
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EMBL; K02286; AAA61252.1; --
EMBL; A21571; CAA01559.1; --
EMBL; A18397; CAA01390.1; --
PIR; A00931; UKHU.
PDB; IKDU; 31-OCT-93.
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MEDINE=90287734; PubMed=2113276;

AU Y.D.T., Wang T.W., Clowes A.W.;

Au Y.D.T., Wang T.W., Clowes A.W.;

Au V.D.T., Wang T.W., Clowes A.W.;

Au V.D.T., Wang T.W., Clowes A.W.;

Plasminogen activator.";

INUCLEIC ACAGE Res. 18:3411-3411(1990).

10 Lasminogen to form plasmin.

11 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

12 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

13 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

14 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

15 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

16 CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

17 CATALYTIC ACTIVITY: COLTAINS A SHORT AI CHAIN (BY SIMILARITY).

18 CATALYTIC ACTIVITY: Contains 1 EGF-like domain.
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                                                                                    KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKGNYCRNPDN 127
                                                             1 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                    Gaps
                                                                                                                                                                                                                    01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-APR-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
(U-plasminogen activator).
                                                                                                                                                                                                                                                                                                       Papio cynocephalus (Yellow baboon).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Cercopithecidae,
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            Length 431;
                                    Indels
                                      ;
            Score 510; DB 1;
Pred. No. 1.6e-51;
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                                      0; Mismatches
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                                                                                                                61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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InterPro; IPR006209; EGF like.
InterPro; IPR0062010; IEGF.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00051; Kringle; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRODOM; PRODO0395; Kringle; 1.
SWART; SW00181; EGF; 1.
SWART; SW00130; KR; 1.
PROSITE; PS00022; EGF_1; 1.
             100.0%;
100.0%;
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                                      88; Conservative
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HSSP; P00749; 1LMW.
MEROPS; S01,231; -.
            Query Match
Best Local Similarity
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P16227;
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UROK PAPCY
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MEDLINE=85087954; PubMed=6096812;
Magamine Y., Pearson D., Altus M.S., Reich E.;
"cDMA and gene nucleotide sequence of porcine plasminogen activator.";
Nucleic Acids Res. 12:9525-9541(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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Urokinase-type plasminogen activator precursor (BC 3.4.21.73) (uPA)
(U-plasminogen activator).
PROSITE; PS01186; EGF_2; FALSE_NEG.
PROSITE; PS00001; KRINGLE_1; 1.
PROSITE; PS500701; KRINGLE_2; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_ER; 1.
PROSITE; PS00135; TRYPSIN_ER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                 UROKINASE-TYPE PLASMINOGEN ACTIVATOR
                                                                                                                                                                                                                                                CHAIN A (BY SIMILARITY).
SHORT A CHAIN (A1) (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
EGF-LIKE.
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Submitted (DEC-1986) to the PIR data bank.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
plasminogen to form plasmin.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93.1%; Score 475; DB 1; Length 433; 94.3%; Pred. No. 1.8e-47;
                                                                                                                                                                                                                                                                                                                                                                                      SERINE PROTEASE.
BY SIMILARITY.
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CHARGE RELAY SYSTEM.
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13-AUG-1987 (Rel. 05, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 1.8e
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                KRINGLE
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hes 83; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9823;
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178
178
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P04185;
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CARBOHYD
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DISULFID
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Kefford R.F.;
                                                                                     UROK RAT
P29598;
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                                                                  UROK RAT
                                                                                                           DATE TENERS AND DESCRIPTION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF
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                                                                                                                                                                                                                                                                                 | Harry | Albert | Cardens | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | Albert | A
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-> H (IN REF. 1; CAA26511).
-> GS (IN REF. 1; CAA25806)
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W-LINKED (GLCNAC. . .).

BY SIMILARITY.

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INTERCHAIN (BY SIMILARITY).

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49116 MW; EE32FCEF501321EE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONNECTING PEPTIDE.
SIMILARITY: Contains 1 kringle domain. SIMILARITY: Contains 1 EGF-like domain.
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                                                                                                                                                                                                                                           EMBL; X01648; CAA25806.1; -. EMBL; X02724; CAA26511.1; -.
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Best Local Similarity 81...
Rest Local Similarity 61...
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235
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387
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153
189
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393
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442 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plasminogen to form plasmin.

-!- SUBUNIT: FOUND IN HIGH AND LOW MOLECULAR MASS FORMS. BACH
CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM
CONTAINS A LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 156 IN THE
LOW MOLECULAR MASS FORM TO YIELD A SHORT A! CHAIN (BY SIMILARITY).
-!- SIMILARITY: CONLAINS ! Kringle domain.
-!- SIMILARITY: CONLAINS ! REFORM to domain.
                                                                                                                                                                                                                                                                                                                        Eukaryota, Merazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
NCBI_TaxID=10116;
                                                                     01-APR-1993 (Rel. 25, Created)
1-APR-1993 (Rel. 25, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (UPA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Transcriptional and posttranscriptional activation of urokinase plasminogen activator gene expression in metastatic tumor cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rabbani S.A.;
Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Fischer 344;
MEDLINE-92233409; PubMed=1568219;
Henderson B.R., Tansey W.P., Phillips S.M., Ramshaw I.A.,
432 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PRO0722; CHYMOTRYPEIN.
PRINTS; PR00722; CHYMOTRYPEIN.
PRINTS; PR0018; KRINGLE.
PRODOM; PR000189; KRINGLE.
SMART; SM00181; EGF; 1.
SMART; SM00181; EGF; 1.
PR051TE; PS00022; EGF=1; 1.
PROSITE; PS00022; FRINGLE_1; 1.
PROSITE; PS00702; KRINGLE_2; 1.
PROSITE; PS00704; KRINGLE_1; 1.
PROSITE; PS00704; KRINGLE_1; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; FALSE_NEG.
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InterPro; IPR006209; EGF 11ke.
InterPro; IPR006210; IEGF 11ke.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 1.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plasminogen activator gene exp
Cancer Res. 52:2489-2496(1992)
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EMBL; X65651; CAA46601.1; -.
PIR; S24664; X18932.
HSSP; P00749; 1KDU.
MEROPS; S01.231; -.
                                                                                                                                                                                                                               (U-plasminogen activator).
STANDARD;
                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
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us-09-880-503-1.rsp

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UROK BOVIN STANDARD; PRT; 433 AA.
Q05589; Q28209;
Q1-FEB-1994 (Rel. 28, Created)
O1-FEB-1994 (Rel. 28, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
PLAU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus (Bovine).
Bukaryota; Metasoca; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                UROKINASE-TYPE PLASMINOGEN ACTIVATOR
Plasminogen activation; Hydrolase; Serine protease; Glycoprotein;
Kringle; EGF-like domain; Zymogen; Signal.
SIGNAL 19 POTENTIAL.
                                                       CHAIN A (BY SIMILARITY).
SHORT A CHAIN (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
EGF-LIKE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       79.6%; Score 406; DB 1; Length 432; 79.5%; Pred. No. 1.7e-39;
                                                                                                                                                            SERINE PROTEASE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
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CHARGE RELAY SYSTEM.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
TISSUB=Aortic endothelium;
MEDLINE=91216119; PubMed=8385052;
Kraetzschmar J., Haendler B., Kojima S., Rifkin D.B.,
Schleuning W.-D.;
                                                                                                                                                                                                                                                                                                                                                                        N -> H (IN REF. 2).
E -> G (IN REF. 2).
D -> N (IN REF. 2).
                                                                                                                               KRINGLE.
CONNECTING PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 1.7e
5; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                          47957 MW;
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nes 70; Conservative
                                                  332
432 AA;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R INCEPTO; IPRODUCES; ALIMBET.

R Pfam; PF00015; Kringle; 1

R PFAM; PF00015; Kringle; 1

R PRINTS; PR00722; CHYMOTRPIN.

R PRINTS; PR00725; CHYMOTRPIN.

R PRODOM; PRINGLE.

R PRODOM; PRINGLE.

R PROSTITS; PR00020; TRYP, SPC; 1.

R PROSTITE; PR00021; EGF 1; 1.

R PROSTITE; PR00021; KRINGLE 1; 1.

R PROSTITE; PR00021; KRINGLE 1; 1.

R PROSTITE; PR00011; KRINGLE 1; 1.

R PROSTITE; PR00114; TRYPRIN INS; 1.

R PROSTITE; PR00114; TRYPRIN INS; 1.

R PROSTITE; PR00114; TRYPRIN INS; 1.

R PROSTITE; PR0114; TRYPRIN INS; 1.

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R PROSTITE; PR0114; TRYPRIN INS; 1.
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CHAIN B (BY SIMILARITY)
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Pred. No. 2.4e-38;
-!- INDUCTION: By retinoic acid.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: Contains 1 kringle domain.
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8; Mismatches
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InterPro; IPR006209; EGF like.
InterPro; IPR000001; Kringle.
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ERMBL, X85801; CAAS9796.1; -.
PIR, JN0560; JN0560.
HSSP, P00749; LLMW.
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76.18;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=88163489; PubMed=2831940;
Degen S.J.F., Heckel J.L., Reich B., Degen J.L.;
Degen S.J.F., Heckel J.L., Reich B., Degen J.L.;
Degen S.J.F., Heckel J.L., Reich B., Degen J.L.;
Biochemistry 26:8279-8279(1987).
-!- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.
-!- CATALYTIC ACTIVITY: AND B. THE HIGH MOLECULAR MASS FORMS. EACH CONSISTS OF TWO CHAINS, A AND B. THE HIGH MOLECULAR MASS FORM CONTAINS A LONG CHAIN A. CLEAVAGE OCCURS AFTER RESIDUE 156 IN THE LOW MOLECULAR MASS FORM TO YIELD A SHORT A! CHAIN (BY SIMILARITY).
-!- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                        01-JAN-1988 (Rel. 06, Last sequence update)
28-PEB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

MEDLINE=85179474; PubMed=2985383;

Belin D., Vassalli J.-D., Combepine C., Godeau F., Nagamine Y.,

Reich E., Kocher H.P., Duvoisin R.M.;

"Cloning, nucleotide sequencing and expression of cDNAs encoding mouse urokinase-vype plasminogen activator.";

Eur. J. Biochem. 148:225-232(1985).
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PRINTS; PR00722; CHYMOTRYPEIN.
PRODOM; PR00018; KRINGLE.
PRODOM; PR000189; KRINGLE.
SWART; SW00181; BGF; 1.
SWART; SW00020; TRP, 1.
PROSITE; PS00022; EGF 2; FALSE NEG.
PROSITE; PS00021; EGF 2; FALSE NEG.
PROSITE; PS00010; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
PROSITE; PS50070; KRINGLE 2; 1.
PROSITE; PS50070; KRINGLE 2; 1.
PROSITE; PS50140; TRYPSIN DOM; 1.
PROSITE; PS50140; TRYPSIN DOM; 1.
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Interpro; IPR006209; EGF like.
InterPro; IPR006010; IEGF
InterPro; IPR000001; Kringle.
InterPro; IPR001224; Ser protease Try.
Pfam; PF00051; Kringle; I
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EMBL, M17922; AAA40539.1; --
PIR, A29420; UKMS.
HSSP, P00749; IKDU.
MEROPS, S01.231; --
MGD; MGI:97611; Plau.
                                                                                                                                     01-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last seq
28-FEB-2003 (Rel. 41, Last ann
                                                                                                                                                                                                                                  (U-plasminogen activator)
                                                                                           STANDARD;
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P06869;
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69 KTCYHGNGDSYRGKANTDTKGRPCLAMNAPAVLQKPYNAHRPDAISLGLGKHNYCRNPDN 128
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Ann. N.Y. Acad. Sci. 667:395-403(1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FEEDING HABITS OF THIS EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-1996 (Rel. 33, Created)
1-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator beta precursor (EC 3.4.21.68) (DSPA
PROSITE; PS00135; TRYPSIN_SER; 1.
Plaminogen activation; Hydrolase, Serine protease; Glycoprotein;
Kringle; EGF-like domain; Zymogen; Signal.
SIGNAL.
                                                                                    UROKINASE-TYPE PLASMINOGEN ACTIVATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Salivary gland;
MEDLINE=292039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
Gene 105:229-237(1991).
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MEDLINE=93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
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BY SIMILARITY.
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INTERCHAIN (BY SIMILARITY).
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CHARGE RELAY SYSTEM.
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                                                                                                     CHAIN A (BY SIMILARITY)
SHORT A CHAIN (A1).
CHAIN B (BY SIMILARITY)
EGF-LIKE.
                                                                                                                                                                                       KRINGLE.
CONNECTING PEPTIDE.
SERINE PROTEASE.
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                                                                                    433 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
les 64; Conserv
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P98121;
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81 TCYKDQGVTYRGTWSTSESGAQCINWNSNLLTRRTYNGRRSDAITLGLGNHNYCRNPDNN 140

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13.1 SERINE PROTEASE.
226 CHARGE RELAY SYSTEM (BY SIMILARITY).
275 CHARGE RELAY SYSTEM (BY SIMILARITY).
382 CHARGE RELAY SYSTEM (BY SIMILARITY).
52 BY SIMILARITY.
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163 BY SIMILARITY.
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SWART; SW00181; EGF; 1.

SWART; SW00130; KR; 1.

PROSITE; PS00022; EGF 1; 1.

PROSITE; PS00021; KRINGLE 1; 1.

PROSITE; PS00013; KRINGLE 2; 1.

PROSITE; PS00013; TRYPSIN DOM; 1.

PROSITE; PS00134; TRYPSIN LISM; 1.

PROSITE; PS00134; TRYPSIN LISM; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.

PROSITE; PS00135; TRYPSIN SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SALIVARY PLASMINOGEN ACTIVATOR BETA EGF-LIKE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY)
SIMILARITY)
                    CATALYTIC ACTIVITY: Specific cleavage of Arg- |-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 241; DB 1; Length 431;
Pred. No. 2e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kringle, EGF-like domain, Signal, Multigene family. SIGNAL.
                                                                   -:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-:- SIMILARITY: Contains 1 kringle domain.
-:- SIMILARITY: Contains 1 EGF-like domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47.3%; Sco. No. 25. 50.0%; Pred. No. 25. 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001114; Chymotrypsin.
InterPro; IPR005209; BGF like.
InterPro; IPR006209; BGF like.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 1.
Pfam; PF00089; EGF; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00121; CHYMOTRYPSIN.
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                                   plasminogen to form plasmin.
SUBUNIT: Monomer.
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                                                                                                                                                                                                                                                                                  EMBL; M63989; AAA31594.1; -. PIR; JS0599; JS0599. HSSP; P98119; 1A51. MEROPS; S01.239; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 667:395-403(1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE PEEDING HABITS OF THIS EXCLUSIVELY HAEWATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                                                                                                     01-APR-1990 (Rel. 14, Created)
01-FRB-1996 (Rel. 33, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator alpha 2 precursor (EC 3.4.21.68) (DSPA alpha-2) (BAT-PA) (T-Plasminogen activator).
Desmodus rotundus (Vampire bat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- DOMAIN: THE FIBRONECTIN TYPE-I DOMAIN MEDIATES BINDING TO FIBRIN, AND THE KRINGLE DOMAIN APPARENTLY MEDIATES FIBRIN-INDUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plasminogen to form plasmin.
-!- ENZYME REGULATION: ACTIVITY TOWARD PLASMINOGEN IS STIMULATED IN THE PRESENCE OF FIBRIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

TISSUE=Salivary gland;

MEDLINE=92039036; PubMed=1937019;

MEDLINE=92039036.

MEDLINE=92039036; PubMed=18., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;

"The plasminogen activator family from the salivary gland of the vamplire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Chiroptera, Microchiroptera, Phyllostomidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUB-Salivary gland,
MEDLINE-90036867; PubMed-2509450;
Gardell S.J., Duong L.T., Diehl R.E., York J.D., Hare T.R.,
Register R.B., Jacobs J.W., Dixon R.A.F., Friedman P.A.;
"Isolation, characterization, and cDNA cloning of a vampire bat alivary plasminogen activator";
J. Biol. Chem. 264:17947-17952(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -1- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri .
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
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--- SIMILARITY: BELONGS TO PEFTIDASE FAMILY S1.
---- SIMILARITY: Contains 1 EGF-like domain.
---- SIMILARITY: Contains 1 fibronectin type I domain.
---- SIMILARITY: Contains 1 kringle domain.
                                                                                                                                                  477 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND PARTIAL SEQUENCE
                                   141 SKPWCYVIKASKFILEFCSVPVCS 164
62 RRPWCYVQVGLKPLVQECMVHDCA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHARACTERIZATION.
MEDLINE=93393059; PubMed=1309059;
                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                             Desmodontinae; Desmodus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gene 105:229-237(1991)
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ID URT2_DESRO
AC P15638;
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                                                                                                        RESULT 8
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TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR

EMBL; M63988; AAA31593.1; ~.

0; 61

Gaps

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30; Indels

42; Conservative

Matches

Local Similarity

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Hsiung N.
               RESULT 9
TPA_HUMAN
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                                                                                                                                                                                                                                                                                                                                           R SMART; SM00181; EGF; 1.

SMART; SM00181; EGF; 1.

SMART; SM00181; EGF; 1.

R SMART; SM00130; KR; 1.

R PROSITE; PS01022; EGF 2; 1.

R PROSITE; PS01021; KRINGLE 1; 1.

R PROSITE; PS01021; KRINGLE 1; 1.

R PROSITE; PS00021; KRINGLE 1; 1.

R PROSITE; PS00131; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

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R PROSITE; PS00135; TRYPSIN HIS; 1.

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-> H (IN REF. 2).
-> R (IN REF. 2).
17486555C0E5077C CRC64;
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                                                                                                                                        InterPro, IPR006210; IEGF.
InterPro, IPR000001; Kringle.
InterPro, IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187 SKPWCYVIKASKFILEFCSVPVCS 210
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                                                                                Chymotrypsin
                                                                                                                                                                                                Pfam; PF00008; EGF; 1.
Pfam; PF00008; En1; 1.
Pfam; PF00011; kringle; 1.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00012; CHYMOTRPEIN.
PRINTS; PR00018; KRINGLE.
ProDom; PD0000395; Kringle; 1.
                                                                           InterPro; IPR001314; Chymotryps
InterPro; IPR006209; EGF_like.
InterPro; IPR000083; Fibrncthl
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53719 MW;
J05082; AAA31596.1;
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3334
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                   PIR; JS0598; JS0598.
HSSP; P98119; 1A5I.
MEROPS; S01.232; -.
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Best Local Similarity
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SEQUENCE FROM N.A.
MEDLINE=88054470; PubMed=2824147;
Reddy V.B., Garramone A.J., Sasak H., Wei C.-M., Watkins P., Galli J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Siebert P.D., Fong K.;
"Variant tissue-typaminogen activator (PLAT) cDNA obtained from
"Natiant tissue-types";
human endothelial cells.";
Nucleic Acids Res. 18:1086-1086(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=84298137; PubMed=6089198;
Ny T., Elgh F., Lund B.;
The structure of the human tissue-type plasminogen activator gene:
correlation of intron and exon structures to functional and
structural domains.";
Proc. Natl. Acad. Sci. U.S.A. 81:5355-5359(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=86284200; PubMed=3090401;
Harris T.J., Patel T., Marston F.A., Little S., Emtage J.S.,
Opdenakker G., Volckaert G., Rombauts W., Billiau A., Somer P.;
"Cloning of CDNA coding for human tissue-type plasminogen activator and its expression in Escherichia coli.";
Mol. Biol. Med. 3:279-292(1986).
                                                                                                                                                                                                                                                            TISSUE=Melanoma;
MEDLINE=8311562; PubMed=6337343;
MEDLINE=8311562; PubMed=6337343;
Permica D., Holmes W.E., Kohr W.J., Harkins R.N., Vehar G.A.,
Ward C.A., Bennett W.F., Yelverton E., Seeburg P.H., Heyneker H.L.,
Goeddel D.V., Collen D.;
"Cloning and expression of human tissue-type plasminogen activator
cDNA in E. Coli.";
                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUB=Fecal lung;
MEDLINE=88262579; PubMed=3133640;
Sasaki H., Saito Y., Hayashi M., Otsuka K., Niwa M.;
"Nucleotide sequence of the tissue-type plasminogen activator CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Expression of human uterine tissue-type plasminogen activator in mouse cells using BPV vectors.";
DNA 6:461-472(1987).
                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
TPA HUMAN STANDARD; PRT; 562 AA.
20.0756; 0.015103;
21.JUL-1986 (Rel. 01, Last sequence update)
21.JUL-1986 (Rel. 01, Last sequence update)
21.SEP-2003 (Rel. 42, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator) (Alteplase) (Reteplase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-86196143; PubMed=3009482;
Friezner Degen S.J., Rajput B., Reich E.;
"The human tissue plasminogen activator gene.";
J. Blol. Chem. 261:6972-6985(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from human fetal lung cells.";
Nucleic Acids Res. 16:5695-5695(1988)
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MEDLINE=90192129; PubMed=2107528;
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                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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          Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Ratausherg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Altschul S.F., Zeeberg B., Buetew K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Zeeberg B., Buetew K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Brownstein M.J., Usdin T.B., Farmer A.A., Rubin G.M., Hong L.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,
Bosak S.A., McEwan P.G., McKernan K.J., Malek J.A., Gabs R.A.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzry D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Setteman M., Madrigues S., Sanchez A.,
Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
Roberation and initial analysis of more than 15,000 full-length
It human and mouse cDNA sequences.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 31-562 FROM N.A.
MEDLINE-91291340; PubMed-1368681;
Itagaki Y., Yasuda H., Morinaga T., Mitsuda S., Higashio K.;
"Purification and characterization of tissue plasminogen activator secreted by human embryonic lung diploid fibroblasts, IMR-90 cells.";
Agric. Biol. Chem. 55:1225-1232(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=85000468; pubMed=6433976; Pohl G. Kaellstroem M., Bergsdorf N., Wallen P., Joernvall H.; Pohl G., Kaellstroem M. Bergsdorf N., Wallen P., Joernvall H.; "Tissue plasminogen activator: peptide analyses confirm an indirectly derived amino acid sequence, identify the active site serine residue, establish glycosylation sites, and localize variant differences."; Biochemistry 23:3701-3707(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Isolation and characterization of the human tissue-type plasminogen activator structural gene including its 5' flanking region."; J. Biol. Chem. 260:11223-11230(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wallen P., Pohl G., Bergsdorf N., Raanby M., Ny T., Joernvall H., "Purification and characterization of a melanoma cell plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ᇤ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Isolation of cDNA sequences coding for a part of human tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=90092112; PubMed=2513186;
Pfeiffer G., Schmidt M., Strube K.-H., Geyer R.;
"Carbohydrate structure of recombinant human uterine tissue
Plasminogen activator expressed in mouse epithelial cells.";
Eur. J. Blochem. 186:273-286(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Edlund T., Ny T., Raanby M., Heden L.-O., Palm G., Holmgren Josephson S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-36 FROM N.A.
MEDLINE=85289338; PubMed=3161893;
Fisher R., Waller E.K., Grossi G., Thompson D., Tizard R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91159408; PubMed=1900431;
Harris R.J., Leonard C.K., Guzzetta A.W., Spellman M.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plasminogen activator.";
Proc. Natl. Acad. Sci. U.S.A. 80:349-352(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biochem. 132:681-686(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 212-361 FROM N.A. MEDLINE-83169656; PubMed=6572897;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=83209620; PubMed=6682760;
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Byeon I.-J.L., Kelley R.F., Llinas M.;
"IH NMR structural characterization of a recombinant kringle 2 domain
from human tissue-trype plasminogen activator.";
Biochemistry 28:3550-9360(1989).
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Bycon I.-J.L., Llinas M.;
"Solution structuras M.;
2 domain complexed to 6-aminohexanoic acid an antifibrinolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Lysine 156 promotes the anomalous proenzyme activity of tPA: X-ray crystal structure of single-chain human tPA.";
EMBO J. 16:4797-4805(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "The 2.3 A crystal structure of the catalytic domain of recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=91200042; PubMed=1901789; Payon I.-01L., Kelley R.F., Llinas M.; Payon I.-01L., Kelley R.F., Llinas M.; "Kringle-2 domain of the tissue-type plasminogen activator. IH-NMR assignments and secondary structure.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=92118803; PubMed=1310033; de Vos A., Ultech M.H., Kalley R.F., Padmanabhan K., Tulinskly A., Westbrook M.L., Kossiakof A.A.; "Crystal structure of the kringle 2 domain of tissue plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
D
"Tissue plasminogen activator has an O-linked fucose attached to threonine-61 in the epidermal growth factor domain."; Biochemistry 30:2311-2314(1991).
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MEDLINE=96200985; PubMed=8613982;
Lamba D., Bauer M., Huber R., Fischer S., Rudolph R., Kohnert
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                                                                                                                                                                           MEDLINE=91244765; PubMed=1645336;
Vlahos C.J., Wilhelm O.G., Hassell T., Jaskunas S.R., Bang
"Disulfide pairing of the recombinant kringle-2 domain of
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MEDLINE=97449126; PubMed=9305622;
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J. Biol. Chem. 266:10070-10072(1991).
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J. Mol. Biol. 258:117-135(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=90122799; PubMed=2558718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activator at 2.4-A resolution."; Biochemistry 31:270-279(1992).
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MEDLINE-90130448; PubMed=2105315;
MEDLINE-90130448; PubMed=2105315;
MITHORITH STRUCTURE OF the TATA-Less rat tissue-type plasminogen activator differences in regulation of gene expression.";

Gene. Species-specific sequence divergences in the promoter predict differences in regulation of gene expression.";

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.

PTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER RANCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATALYZED BY PLASMIN, TISSUE KALLIKREIN OR FACTOR XA.

MISCELLANEONS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENHANCES ITS CATALYTIC ACTIVITY.

SIMILARITY: BELONGS TO PERFITIANSE FAMILY S1.

SIMILARITY: Contains 1 EGF-like domain.

SIMILARITY: Contains 2 kringle domains.
                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                  01-FEB-1991 (Rel. 17, Created)
01-NOV-1991 (Rel. 20, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Tissue-type plasminogen activator precursor (EC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator).
                                                                                                                                                                                                                                                                               Ny T., Leonardsson G., Haueh A.J.W.;
Planing and characterization of a cDNA for rat tissue-type
plasmingen activator.";
DNA 7:671-677(1988).
559 AA
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EMBL, M31189; AAA42261.1; -
EMBL, M31189; AAA42261.1; JOINED.
EMBL, M31186; AAA42261.1; JOINED.
EMBL, M31187; AAA42261.1; JOINED.
EMBL, M31189; AAA42261.1; JOINED.
EMBL, M31189; AAA42261.1; JOINED.
EMBL, M31190; AAA42261.1; JOINED.
EMBL, M31191; AAA42261.1; JOINED.
EMBL, M31191; AAA42261.1; JOINED.
EMBL, M31191; AAA42261.1; JOINED.
EMBL, M31191; AAA42261.1; JOINED.
                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=89170114; PubMed=3148445;
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R SMART; SMO0181; EGF; 1.

SMART; SMO0181; EGF; 1.

SMART; SMO0135; KR; 2.

R SMART; SMO0130; KR; 2.

R RANGTE; SMO0120; EGF 1, 1.

R PROSITE; PSO1021; EGF 1, 1.

R PROSITE; PSO1021; KRINGLE 1; 2.

R PROSITE; PSO1021; KRINGLE 1; 2.

R PROSITE; PSO1034; TRYPSIN JIS; 1.

R PROSITE; PSO1135; TRYPSIN JIS; 1.

R PROSITE; PSO1135; TRYPSIN JIS; 1.

R PROSITE; PSO1135; TRYPSIN JIS; 1.

R PROSITE; PSO1135; TRYPSIN JIS; 1.

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TISSUE-TYPE PLASMINOGEN ACTIVATOR
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TISSUE-TYPE PLASMINOGEN ACTIVATOR
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FIBRONECTIN TYPE-I.
EGF-LIKE.
KRINGLE 1.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006209; Fibrnctn1.
InterPro; IPR006210; IBGF.
InterPro; IPR00001; Kringle.
InterPro; IPR00001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00009; fn1; 1.
Pfam; PF00051; kringle; 2.
Pfam; PF00089; kringle; 2.
Pfam; PF00089; kringle; 2.
Pfam; PF00089; kringle; 2.
PRINTS; PR00722; CHYMOTRYPSIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                      vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 667:395-403 (1992).
-!- FUNCTION: PROBABLY ESSENTIAL TO SUPPORT THE FEEDING HABITS OF TH
EXCLUSIVELY HAEMATOPHAGOUS ANIMAL. PROBABLE POTENT THROMBOLYTIC
                                                                                                          01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator gamma precursor (EC 3.4.21.68) (DSPA
                                                                                                                                                                                                                              SECURNCE FROM N.A.
TISSUB=Salivary gland;
TISSUB=Salivary gland;
MEDLINRE-92039036; PubMed=1937019;
Kraetzschmar J., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PSSOUGH, TANDELL C, ...
PROSITE; PSSOUGH; TRYPSIN_DOM; 1.
PROSITE; PSOUGH; TRYPSIN_HIS; 1.
PROSITE; PSOUGH; TRYPSIN_SER; 1.
PROSITE; PSOUGH; TRYPSIN_SER; 1.
                                                                                                                                                             Desmodus rotundus (Vampire bat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
                                                                                                                                                                                                                                                                                                                                                CHARACTERIZATION.
MEDLINES-93393059; PubMed=1309059;
Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              plasminogen to form plasmin.
SUBUNIT: Monomer.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                           394 AA
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InterPro, IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; JS0600; JS0600.
HSSP, P98119; LA51.
HSCOPS, S01.239; LA51.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR00001; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SMO0020; Tryp SPc; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 1.
                                                                                                01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last seq
28-FEB-2003 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M63990; AAA31595.1; -.
                                                                                                                                                                                              Desmodontinae; Desmodus.
NCBI TaxID=9430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00051; kringle;
Pfam; PF00089; trypsin;
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                                                                           DESRO
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P49150;
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MDLINE-22388257; PubMed=12477932;

MDLINE-22388257; PubMed=12477932;

MDLINE-22388257; PubMed=12477932;

MDLINE-22388257; PubMed=12477932;

MALTANDER R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

MALSchul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

MALSCHORO L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

MALCHORKO L., Marusina R., Pomaldo M.F., Casavant T.L., Scheetz T.E.,

MALCHORO L., Marusina R.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

MALOMARIA S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Richards S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunbarane P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gaby E.J., Hulyk S.M.,

Willalon D.K., Muxny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Millalon D.K., Muxny D.M., Madan A., Rodrigues S., Sanchez A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Miting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rahesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44 TCYKDQGVTYRGTWSTSESGAQCINWNSNLLIRRTYNGRMPEAVKLGLGNHNYCRNPDGA 103
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Rickles R.J., Darrow A.L., StrickLand S.;
"Molecular cloning of complementary DNA to mouse tissue plasminogen
activator mRNA and its expression during F9 teratocarcinoma cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
NCBI_TaxID=10090;
                                      SALIVARY PLASMINOGEN ACTIVATOR GAMMA
                                                                                                                                                                           SIMILARITY).
SIMILARITY).
SIMILARITY).
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                                                                                     KRINGLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44105 MW;
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Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            394 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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RESULT 13
URT1_DESRO
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         DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DDT TO DD
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Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schern J.E., Jones S.J.M., Marra M.A.; Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).

1. FINCTION: CONVERTS THE ABUNDANT, BUT INACTIVE, ZYMOGEN PLASMINOGEN TO PLASMIN BY HYDROLYZING A SINGLE ARG-VAL BOND IN PLASMINOGEN. BY CONTROLLING PLASMIN-MEDIATED PROTECLYSIS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND MANY OTHER PHYSIOPATHOLOGICAL EVENTS.

-:- CATALYTIC ACTIVITY: Specific cleavage of Arg-|-Val bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR.

PTM: THE SINGLE CHAIN, ALMOST FULLA ACTIVE BNZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER ARG-308 CATALYZED BY PLASMIN, TISSUE KALLIKREIN OR FACTOR XA.

RISCELLANDONS: BINDS TO THE KRINGLES STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO FIBRIN ENRANCES ITS CATALYTIC ACTIVITY.

SIMILARITY: CONTAİNS I GGF-LİKE GÖMBİN.

SIMILARITY: CONTAİNS I ÉLDODACCTÍN TYPE I GOMBİN.

SIMILARITY: CONTAİNS I ÉLDODACCTÍN TYPE I GOMBİN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MCG1 | MCG1 | MCG1 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | MCG2 | 
                                                                                                                                                                                                                                                                                                                                                                  plasminogen to form plasmin.
SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
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TISSUE-TYPE PLASMINOGEN ACTIVATOR A
CHAIN.
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PIR; A29941, A29941.
HSSP, P00750; IASH.
MERQPS; S01.232; --
MGD; MGI:97610; Plat.
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01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Salivary plasminogen activator alpha 1 precursor (EC 3.4.21.68) (DSPA alpha-1).
Desmodus rotundus (Vampire bat).
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Mammalia, Eutheria, Chiroptera, Microchiroptera, Phyllostomidae,
Desmodontinae, Desmodus.
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TISSUB-Salivary gland;
MEDLINE-92039064 b. DebMed=1937019;
Kraetzschmar J. Haendhea=1937019;
Kraetzschmar P., Haendler B., Langer G., Boidol W., Bringmann P., Alagon A., Donner P., Schleuning W.D.;
"The plasminogen activator family from the salivary gland of the vampire bat Desmodus rotundus: cloning and expression.";
Gene 105:229-237(1991).
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Schleuning W.-D., Alagon A., Boidol W., Bringmann P., Petri T.,
Kraetzschmar J., Haendler B., Langer G., Baldus B., Witt W.,
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FIBRONECTIN TYPE-I.
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MEDLINE=98022741; Pubbed=9354616;

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"Plasminogen activators from the saliva of Desmodus rotundus (common vampire bat): unique fibrin specificity.";
Ann. N.Y. Acad. Sci. 667:395-403(1992).
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
SIMILARITY: Contains 1 EGF-like domain.
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41.8%; Score 213; DB 1; Length 47
Best Local Similarity 46.4%; Pred. No. 3.9e-17;
Matches 39; Conservative 10; Mismatches 35; Indels 53616 MW; AA06FD1739C10E5E CRC64;

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127 ICYEGQGVTYRGTWSTAESRVECINWNSSLLTRRTYNGRMPDAFNLGLGNHNYCRNPNGA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ravn P., Berglund L., Petersen T.E.; "Cloning and characterization of the bovine plasminogen activators uPA and tPA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Int. Dairy J. 5:605-617(1995)..

-i. FUNCTION: CONVERTS THE ABUNDANT, BUT INACTIVE, ZYMOGEN PLASMINOGEN PLASMINOGEN PLASMINOGEN BY TO PLASMIN BY HYDROLYZING A SINGLE ARG-VAL BOND IN PLASMINOGEN. BY CONTROLLING PLASMIN-MEDIATED PROTECULYS, IT PLAYS AN IMPORTANT ROLE IN TISSUE REMODELING AND DEGRADATION, IN CELL MIGRATION AND MANY OTHER PHYSIOPATHOLOGICAL EVENTS.

-i. CAPILLYITC ACTIVITY: Specific cleavage of Arg-|-Val bond in plasminogen to form plasmin.

-i. SUBUNIT: HETERODIMER OF CHAIN A AND CHAIN B HELD BY A DISULFIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PTM: THE SINGLE CHAIN, ALMOST FULLY ACTIVE ENZYME, CAN BE FURTHER PROCESSED INTO A TWO-CHAIN FULLY ACTIVE FORM BY A CLEAVAGE AFTER AGG-314 CATALLYZED BY PLASMIN, TISSUB KALLIKREIN OR FACTOR XA. MISCELLANEONS: BINDS TO THE KRINGLE STRUCTURE OF THE FIBRIN A CHAIN. BINDING TO PIBRIN ENHANCES ITS CATALYTIC ACTIVITY. SIMILARITY: COLLAID I BGF-like domain. SIMILARITY: Contains I EGF-like domain. SIMILARITY: Contains I fibronectin type I domain. SIMILARITY: Contains I kibronectin type I domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus (Bovine).
Evkaryota; Metazos, Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
                                                                                                                                                                                                                            TPA BOVIN STANDARD; PRT; 566 AA.

Q28198;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
15.sue-type plasminogen activator precursor (BC 3.4.21.68) (tPA)
(t-PA) (t-plasminogen activator).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: SECRETED; EXTRACELLULAR
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InterPro; IPR006209; BGF_like.
InterPro; IPR006210; Ishrictal.
InterPro; IPR006210; IESF.
InterPro; IPR00001; Kringle.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; 1.
                                                                                       187 PKPWCYVIKAGKFTSESCSVPVCS 210
                                                   RRPWCYVQVGLKPLVQECMVHDCA
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PRINTS, PRO0018, KRINGLE.
ProDom, PD000395, Kringle, 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X85800; CAA59795.1; -. HSSP; P00750; 1RTF.
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Pfam, PF00051; kringle; 2.
Pfam, PF00089; trypsin; 1.
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R SWART; SM00181; EGF; 1.

R SWART; SM001058; FN1; 1.

R SWART; SM001020; TR; 2.

R SWART; SM001020; TR; 2.

R RASTIE; PS01022; EGF_1; 1.

R PROSITE; PS01023; FIERONECTIN 1; 1.

R PROSITE; PS01024; KRINGLE_1; 1.

R PROSITE; PS00104; KRINGLE_2; 2.

R PROSITE; PS00104; TRYPSIN DOM; 1.

R PROSITE; PS00104; TRYPSIN DOM; 1.

R PROSITE; PS00104; TRYPSIN SER; 1.

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01-APR-1990 (Rel. 14, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Urokinase-type plasminogen activator precursor (EC 3.4.21.73) (uPA)
Gallus gallus (Chicken).
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TISSUE-TYPE PLASMINOGEN ACTIVATOR A
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47.6%; Pred. No. 1.3e-16;
tive 9; Mismatches 34; Indels
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KRINGLE 2.
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Matches 39, Conservative
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Query Match
Best Local Similarity 54.4%;
Matches 37; Conservative 7
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MIM; 604552; -.
                                                                                                            135 SRPWCYTK 142
                                                                                         62 RRPWCYVQ 69
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HSSP; P00763; 1DPO
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Eukaryota, Metazoa, Chordata; Craniata, Vertebrata, Euteleostomi,
Archosauria, Aves, Neognathae, Galliformes, Phasianidae, Phasianinae,
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N-LINKED (GLCNAC. . .) (POTENTIAL).
(M) BD881048DD666ASS CRC64;
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CHAIN A (BY SIMILARITY).
CHAIN B (BY SIMILARITY).
                                              *SEQUENCE FROM N.A.

**MEDLINES=90110185; PubMed=2295632;

Leslie N.D., Kessler C.A., Bell S.M., Degen J.L.;

Leslie N.D., Kessler C.A., Bell S.M., Degen J.L.;

"The chicken urokinase-type plasminogen activator gene.";

J. Biol. Chem. 265:1339-1344(1990).

-! CATALYTIC ACTIVITY: Specific cleavage of Arg-|-val bond in plasminogen to form plasmin.

-! SIMILARITY: BELONGS TO PERPITIBASE FAMILY S1.

-! SIMILARITY: Contains 1 kringle domain.

-! SIMILARITY: Contains 1 EGF-like domain.
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434 AA;
                             NCBI_TaxID=9031;
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                                                                                                                      79 CYSGNGEDYRGMAEDP----GCLYWDHPSVIRWGDYHADLKNALQLGLGKHNYCRNPNGR 134
                                                                                61
                                                                                3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQ-QTYHAHRSDALQLGLGKHNYCRNPDNR
                                        Gaps
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kitamura N.;
"Molecular cloning and sequence analysis of the cDNA for a human serine protease reponsible for activation of hepatocyte growth factor. Structural similarity of the protease precursor to blood coagulation factor XII.;
J. Biol. Chem. 268:10024-10028(1993).
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204756, 014726;

01-JUN-1994 (Rel. 29, Last sequence update)

01-JUN-1994 (Rel. 29, Last sequence update)

28-FRB-2003 (Rel. 41, Last annotation update)

Hepatocyte growth factor activator precursor (EC 3.4.21.-) (HGF
                                        5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhao S., Odell C.;
Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: ACTIVATES HEPATOCYTE GROWTH FACTOR (HGF) BY
CONVERTING IT FROM A SINGLE CHAIN TO A HETERODIMERIC FORM.
-!- SUBUNIT: DIMER OF A SHORT CHAIN AND A LONG CHAIN LINKED BY
DISULFIDE BOND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SUBCELLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN PRECURSOR AND IS THEN ACTIVATED TO A HETERODIMERIC FORM.
-!- TISSUB SPECIFICITY: LIVER.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 1 EDF-LIKE domains.
-!- SIMILARITY: CONTAINS 1 fibronectin type I domain.
-!- SIMILARITY: CONTAINS 1 fibronectin type II domain.
-!- SIMILARITY: CONTAINS 1 fibronectin type II domain.
-!- SIMILARITY: CONTAINS 1 KYINGLE domain.
-!- SIMILARITY: CONTAINS 1 KYINGLE domain.
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  Length 434;
                                        Indels
  DB 1;
Score 198.5; DB 1;
Pred. No. 1.7e-15;
7; Mismatches 19;
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SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MIM; 604552; -.
GO; GO:0005576; C:extracellular; TAS.
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MEDLINE=93252878; PubMed=7683665;
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CARBOHYD
CONFLICT
SEQUENCE
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HGFA MOUSE
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R InterPro; IPR00134; ChymotryPsin.

R InterPro; IPR000342; EGF_1ke.

R InterPro; IPR000629; EGF_1ke.

R InterPro; IPR000652; FN Type_II.

R InterPro; IPR000652; FN Type_II.

R InterPro; IPR000652; FN Type_II.

R InterPro; IPR000652; FN Type_II.

R InterPro; IPR000654; FN Type_II.

R InterPro; IPR000656; EGF_2.

R Fam; PF000069; EGF; 2.

P Fam; PF000069; EGF_1.

P Fam; PR00013; FNTYPEII.

P RINTS; PR00013; FNTYPEII.

P RINTS; PR00013; FNTYPEII.

R RNART; SM00189; FNTYPEII.

R SMART; SM00059; FNZ; 1.

SMART; SM00059; FNZ; 1.

R SMART; SM00059; FNZ; 1.

R SMART; SM00050; FNZ; 1.

R PROSTIE; PS00022; FIBROMECTIN_2; 1.

R PROSTIE; PS00023; FIBROMECTIN_2; 1.

R PROSTIE; PS00023; FIBROMECTIN_2; 1.

R PROSTIE; PS00023; FIBROMECTIN_2; 1.

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R PROSTIE; PS00023; FIBROMECTIN_3; 1.

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R PROSTIE; PS00023; FIBROMECTIN_3; 1.
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HEPATOCYTE GROWTH FACTOR ACTIVATOR SHORT
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 GO; GO:0006508; P:proteolysis and peptidolysis; TAS.
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EGF-LIKE 1.
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                                                                                                                                                                                                                                                                                                                   286 CFLGNGTGYRGVASTSASGLSCLAMNSDLLYQELHVDSVGAAALLGLGPHAYCRNPDNDE 345
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Van Adelsberg J.S., Sehgal S., Kukes A., Brady C., Barasch J.,
Vang J., Huan Y.;

"Activation of HGF by endogenous HGF activator is required for
metanephric kidney morphogenesis in vitro.";
Submitted (JAM-2000) to the EMBL/Genbank/DDBA databases.

-i. FUNCTION: ACTIVATES HEAPTOCYTE GROWTH FACTOR (HGF) BY CONVERTING
-i. FUNCTION: DIMER OF A SHORT CHAIN AND A LONG CHAIN LINKED BY A
DISULFIDE BOND (BY SIMILARITY).

-i. SUBCELLULAR LOCATION: SECRETED AS AN INACTIVE SINGLE-CHAIN
PRECURSOR AND IS THEN ACTIVATED TO A HETERODIMERIC FORM (BY
THITTALINA.)
                                                                                                                                                                                                             0; Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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Q9R038; Q9UXV4;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Hepatocyte growth factor activator precursor (EC 3.4.21.-) (HGF
46 N-LINKED (GLCNAC. . .) (POTENTIAL)
44 R -> Q (IN REF. 2).
70681 MM; 2CF72F1E1B862ED7 CRC64;
                                                                                                                                      Query Match 37.8%; Score 193; DB 1; Length 655; Best Local Similarity 54.5%; Pred. No. 1.1e-14; Matches 36; Conservative 4; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Itoh H., Kataoka H., Koono H.; "Mouse hepatocyte growth factor activator."; Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
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EMBL; AF224724; AAF34712.1; -.
HRSP; P00763; 1DP0.
MRSOFs; S01.228; -.
MGD; MGI:1859281; Hgfac.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR005209; EGF_2.
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                                                                             655 AA;
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36.9%;
                      35; Conservative
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             Similarity
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                                                                                                                                                                                                                              (HAF) (Fragment)
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FA12_CAVPO
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HEPATOCYTE GROWTH FACTOR ACTIVATOR SHORT
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KERINGLE SELAY SYSTEM (BY SIMILARITY).

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FIBRONECTIN TYPE-I.
EGF-LIKE 2.
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           interPro; IPR000562; FN Type_II.
 InterPro; IPR000083; Fibrnctn1
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MEDINE-93003367; PubMed=1390917;

MEDINE-93003367; PubMed=1390917;

MEDINE-93003367; PubMed=1390917;

A Gemba U., Yamamotor T., Kunisada T., Shibuya Y., Tanase S.,

Rambara T., Okabe H.;

"Primary structure of guinea-pig Hageman factor: sequence around the classage stre differs from the human molecule.";

Biochim. Biophys. Acra 1159:113-121(1992).

-I- FUNCTION: PACTOR XII IS A SERUM GLYCOPROTEIN THAT PARTICIPATES IN THE INTITATION OF BRADYKININ AND ANGIOTENSIN.

-I- FUNCTION: PACTOR XII Cleaves selectively Arg-|-1le bonds in factor THI INTITATION OF BRADYKININ AND ANGIOTENSIN.

-I- CATALYTIC ACTIVITY: Cleaves selectively Arg-|-1le bonds in factor VII to form factor VII and factor XII to form factor XII.

-I- MISCELLANBOUS: FACTOR XII, PREKALLIKRRIN, AND HWM KINNOGEN FORM A COMPLEX BOUND TO AN ANIONIC SURFACE. PREKALLIKRRIN IS CLEAVED FOR TO ALPHA-FACTOR XII.

-I- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

-I- SIMILARITY: Contains 1 fibronectin type II domain.

-I- SIMILARITY: Contains 2 EGF-like domain.
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                                                                                                     283 CFLGNGTEYRGVASTAASGLSCLAWNSDLLYQELHVDSVAAAVLLGLGPHAYCRNPDKDE 342
                                                                                 62
                                                                              3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR
                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
NCBI_TaxID=10141;
                                                                                                                                                                                                                                                                                                                   004962;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
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Length 653;
Score 188; DB 1; Length 65
Pred. No. 4.2e-14;
6; Mismatches 25; Indels
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INTERPRO; IPRO01314; Chymotrypsin.
INTERPRO; IPR001314; EGF 2.
INTERPRO; IPR001881; EGF 7.
INTERPRO; IPR006209; EGF 11ke.
INTERPRO; IPR000562; FN Type II.
INTERPRO; IPR006210; IEGF.
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ALPHA-FACTOR XIIA LIGHT CHAIN.
FIBRONECTIN TYPE-II.
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nes 36; Conservative
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PF00039; fn1; 1.
PF00040; fn2; 1.
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RRRPWCYVQVGLKPLVQECMVHDC 84

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TISSUE=Blood;
MEDLINE=96133302; PubMed=8528215;
Schloesser M., Hofferbert S., Bartz U., Lutze G., Lammle B., Engel Withe novel acceptor splice site mutation 11396(G-->A) in the factor XII gene causes a truncated transcript in cross-reacting material
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "cDNA sequence coding for human coagulation factor XII (Hageman)."; Nucleic Acids Res. 14:3146-3146(1986).
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND VARIANTS ALA-207; ASP-545 AND HIS-605. Reder M.J., Armel T.Z., Carrington D.P., Ozuna M., Kuldanek S.A., Rajkumar N., Toth B.J., Yi Q., Nickerson D.A.; Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  McGillivray R.T.A.;
"Characterization of human blood coagulation factor XII cDNA.
Prediction of the primary structure of factor XII and the tertiary
Structure of beta-factor XIIa.";
J. Biol. Chem. 260:13666-13676(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-85182674; PubMed-3886654; McMullen B.A., Fujikawa K.; McMullen B.A., Fujikawa K.; McMullen B.A., Fujikawa K.; Mamino acid sequence of the heavy chain of human alpha-factor XIIa (activated Hageman factor)."; J. Biol. Chem. 260:5328-5341(1985).
                                                                                                                                                                 amono saptrata (ruman).
Eukaryota; Macazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDILINE=86216049; PubMed=3011063;
Que B.G., Davie E.W.;
"Characterization of a cDNA coding for human factor XII (Hageman
PA12_HUMAN STANDARD; PRT; 615 AA.
P00748, P78339,
21_UUL-1986 (Rel. 01, Created)
01_CCT-1989 (Rel. 12, Last sequence update)
28_FFB-2003 (Rel. 41, Last annotation update)
Coagulation factor XII precursor (EC 3.4.21.38) (Hageman factor)
(HAF).
                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDAMEd=2888762; MEDINE=88070593; MEDINETB=80070593; MEDINETB=80070593; MEDINETB N.; COOL D.E., MCGLILIYTAY R.T.A.; "Characterization of the human blood coagulation factor XII ge Intron/exon gene organization and analysis of the 5'-flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 14-615 FROM N.A.
MEDLINE=86033830; PubMed=3877053;
Cool D.E., Edgell C.-J.S., Louie G.V., Zoller M.J., Brayer G.
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BODLINE-86176794; PubMed=3754331;
Tripodi M., Citarella F., Guida S., Galeffi P., Fantoni A.,
Cortese R.;
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MEDLINE=83291041; PubMed=6604055;
Fujikawa K., McMullen B.A.;
"Amino acid sequence of human beta-factor XIIa.";
J. Biol. Chem. 258:10924-10933(1983).
                                                                                                                                                                                                                                                                                                                                                     region.";
J. Biol. Chem. 262:13662-13673(1987).
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272 DIRPWCFV 279
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DISEASE: DEFECTS IN F12 DO NOT CAUSE ANY CLINICAL SYMPTOMS. THE SOLE EFFECT IS THAT WHOLE-BLOOD CLOTTING TIME IS PROLONGED.

MISCELLANEOUS: FACTOR XII. PREKALLIKREIN, AND HWW KININOGEN FORM A COMPLEX BOUND TO AN ANIONIC SUFFACE. PREKALLIKREIN IS CLEAVED BY FACTOR XII TO FORM KALLIKREIN, WHICH THEN CLEAVES FACTOR XII FIRST TO ALPHA-FACTOR XIIA AND THEN TO BETA-FACTOR XIIA. ALPHA-FACTOR XIIA AND THEN TO BETA-FACTOR XIIA. ALPHA-FACTOR XIIA. SIMILARITY: CONTAINS 2 EGF-like domains.

SIMILARITY: Contains 2 EGF-like domains.
SIMILARITY: Contains 1 fibronectin type I domain.
SIMILARITY: Contains 1 fibronectin type II domain.
SIMILARITY: Contains 1 kringle domain.
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MEDLINE-99290785; PubMed=10361128;
MEDLINE-99290785; PubMed=10361128;
Mondo S., Tokunaga F., Kawano S., Oono Y., Kumagai S., Koide T.;
Food S., Tokunaga F., Kawano S., Oono Y., Kumagai S., Koide T.;
Food S., Tokunaga F., Kawano S., Oono Y., Kumagai S., Koide T.;
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Food S., Tokunaga F., Kawano Cooke S., Oono Y., Kumagai S., Koide T.;
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Hovinga J.K., Schaller J., Stricker H., Wuillemin W.A., Furlan M.,
Laemmle B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Coagulation factor XII (Hageman factor) Washington D.C.: inactive factor XIIa results from Cys-571-->Ser substitution.";
Proc. Natl. Acad. Sci. U.S.A. 86:8319-8322(1989).
                                                                                                                                                                                     MEDLINE=92184750; PubMed=1544894;
Harris R.J., Ling V.T., Spellman M.W.;
Mo-linked fucose is present in the first epidermal growth factor domain of factor XII but not protein C.";
J. Biol. Chem. 267:5102-5107(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=90046788; PubMed=2510163;
Miyata I., Kawabata S.-I., Iwanaga S., Takahashi I., Alving B.,
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EMBL; AF538691; AAM97932.1; -
EMBL; M1723; AAA70225.1; -
EMBL; M1746; AAB59490.1; -
EMBL; M17465; AAB59490.1; JOINED.
EMBL; M13447; AAA57024.1; -
EMBL; M13147; AAA7024.1; -
EMBL; M13147; AAB51203.1; -
PIR; A29411; KFHU12.
HSSP; P00763; IDPO.
MEROPS; S01.211; -
Genew; HGNC:3530; F12.
negative patients.";
Hum. Mol. Genet. 4:1235-1237(1995)
                                                                                                                                                  CARBOHYDRATE-LINKAGE SITE THR-109.
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VARIANT WASHINGTON D.C. SER-590.
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- FUNCTION: Apo(a) is the main constituent of lipoprotein(a) (Lp(a)). It has serine proteinase activity and is able of autoproteolysis. Inhibits tissue-type plasminogen activator 1. Lp(a) may be a ligand for megalin/dp 330.

SUBUNIT: Disulfide-linked to apo-B100. Binds to fibronectin and
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=89174660; PubMed=2925643;
MEDLINE=89174660; PubMed=170404, Lawn R.M.;
"Tomlinson J.E., McLean J.W., Lawn R.M.;
"Rhesus monkey apolipoprotein(a). Sequence, evolution, and sites of
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PRINTS; PRO0122 THYDRIN.
PRINTS; PRO10139; KRINGLE.
PRINTS; PRO10139; KRINGLE.
SWART; SM00130; KRINGLE.
SWART; SM00130; KRINGLE.
SWART; SM00130; KRINGLE.
1, 10.
PROSITE; PS50240; TRYPSIN_DM; 1.
PROSITE; PS50140; TRYPSIN_DM; 1.
PROSITE; PS01139; TRYPSIN_SER; FALSE NEG.
Hydrolase; Serine procease; Lipid transport; Plasma; Glycoprotein; Kringle; Repeat; Atherosclerosis.
                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                   01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 14, Last annotation update)
Apolipoprotein(a) (EC 3.4.21.-) (Apo(a)) (Lp(a)) (Fragment).
                                                   PRT; 1420 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A32869; A32869.
HSSP; PON441; 2PK4.
HRSPS; SO1.226; --
INTERPRO; IPR001314; Chymotrypsin.
INTERPRO; IPR001011; Kringle.
INTERPRO; IPR001254; Ser_protease_Try.
Pfam; PF00051; Kringle; 11.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KRINGLE 1.
                                                                                                                                                                                                                                           Macaca mulatta (Rhesus macaque)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; J04635; AAA36833.1; -.
                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9544;
                                                   APOA MACMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthesis.
RESULT 20
APOA_MACMU
                                                                               THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF
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                                                                                                                                                                                                                                                                                                                                                                                        1068 CYHGNGQSYRGTFSTTVTGRTCQSWSSMTPHQHKRTPENHPNDDLTM-----NYCRNPDA 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-Brain, and Kidney;

MEDLINE-2116/372; PubMed=11267660;

MEDLINE-2116/372; PubMed=11267660;

MARAMURA T.;

MARAMURA T.;

MARAMURA T.;

MARAMURA T.;

MOlecular cloning and characterization of Kremen, a novel

Kringle-containing transmembrane protein.";

Elochim. Biophys. Acta 1518.63-72/2001).

L. FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf

C.:- FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf

C.:- FUNCTION: Receptor for Dickkopf protein.

C.:- FUNCTION: Receptor for Dickkopf protein.

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C.:- FUNCTION: Receptor for Dickkopf protein.

C.:- FUNCTION: Receptor for Dickkopf protein.

C.:- TISSUE SPECIFICITY: In the adult, widely expression is first detected on day and increases up to day 18. Lower levels are found in adult. At 9.5 dpc. expression is localised to the apical ectodermal ridge (ARR) of the developing fore and hindlindb buds, the telencephalon and the first brachial arch. At 10.5 dpc.

EXPRESSION is also observed in the myotome and in sensory tissues such as the nasal pit and optic vesicle.

C.:- SIMILARITY: Contains 1 kNSC domain.

C.:- SIMILARITY: Contains 1 kNSC domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Kremen protein I precursor (Kringle-containing protein marking the eye and the nose) (Dickkopf receptor).
KREMENI OR KREMEN.
                                                                                                                                                                                                                                                                                                                                              CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                   12;
                                                                                                                                                                                                                                                       Score 161; DB 1; Length 1420; Pred. No. 1.3e-10;
KRINGLE 4.
KRINGLE 4.
KRINGLE 5.
KRINGLE 6.
KRINGLE 7.
KRINGLE 9.
KRINGLE 9.
KRINGLE 10.
KRINGLE 10.
KRINGLE 10.
KRINGLE 10.
KRINGLE 10.
KRINGLE 10.
KRINGLE 10.
                                                                                                                                                                                                                                                                                                 31; Indels
                                                                                                                                                                                                                                                                          Pred. No. 1.3e-
9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1123 DTGPWCFT---MDPSVREYCNLTRCSD 1147
                                                                                                                                                                                                                                                                                                                                                                                                                                     61 RRRPWCYVQVGLKPLVQE--CMVHDCAD 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (Se or send an email to license@isb-sib.ch).
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HSSP; P00747; 1CEA.
277 355
391 469
505 583
619 697
725 803
839 917
953 1031
1067 1145
1191 1420
1420 AA; 158367 M
                                                                                                                                                                                                                                                    31.6%;
40.9%;
                                                                                                                                                                                                                                             Query Match
Best Local Similarity 40.9'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRM1 MOUSE
                                                                                                                                                                                  DOMAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                m
                                                                                           DOMAIN
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                                               DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 CYEGNGHFYRGKASTDIM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the eye
and the nose) (Dickkopf receptor).
KREMENI OR KREMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLCNAC. .) (POTENTIAL).
GLCNAC. .) (POTENTIAL).
GLCNAC. .) (POTENTIAL).
GLCNAC. .) (POTENTIAL).
GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.2%; Score 159; DB 1; Length 473; 45.6%; Pred. No. 6.7e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26; Indels
                                                                                                                                                                                                                                                                                                                                                                                               EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LINKED (GLCNAC. . .) (PC 586827788BE3FDD1 CRC64;
                                                                                                                                                                                                                                                                                                                             Wnt signaling pathway; Signal; Transmembrane; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                     CYTOPLASMIC (POTENTIAL).
MGD; MGI:1933988; Kremen.
GO; GO:0016021; C:integral to membrane; NAS.
InterPro; IPR000859; CUB domain.
InterPro; IPR000809; WSC.
InterPro; IPR002809; WSC.
Fam; PF00431; CUB; 1.
Pfam; PF00431; CUB; 1.
Pfam; PF00421; Kringle; 1.
Pfam; PF00822; WSC; 1.
PRINTS; PR00018; KRINGLE.
PRODOR PRODORS; KRINGLE.
PRODORS; KRINGLE.
PRODORS; KRINGLE.
SWART; SW00130; KR: 1.
                                                                                                                                                                                                                                                                                                                                                                          KREMEN PROTEIN 1.
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PROSITE, PS00021; KRINGLE_1; 1.
PROSITE; PS50070; KRINGLE_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51716 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                        473
392
4113
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321
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           333
345
345
473 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 31; Conserv
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TRANSMEM
DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
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                                                                                                                                                                                                                                                                                                                                                        SIGNAL
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           modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32 CFTANGADYRGTQSWTALQGGKPCLFWNE--TFQHPYNTLKYPNGEGGLGEHNYCRNPDG 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the eye
non-profit institutions as long as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (AUG-2001) to the BMBL/GenBank/DDBJ databases.
-!- FUNCTION: Receptor for Dickkopf protein. Cooperates with Dickkopf to block Wnt/beta-catenin signaling (By similarity).
-!- SUBCELLULAR LOCATION: Type I membrane protein (Potential).
-!- SIMILARITY: Contains 1 CUB domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                            EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9B510857DF856F08 CRC64;
                                                                                                                                                                                                                                                                                                                                                          Transmembrane; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 159; DB 1;
Pred. No. 6.7e-11;
7; Mismatches 26;
                                                                                  EMBL, AB065090; BAB62003.1; -.
GO, GO:0016021; C:integral to membrane; ISS.
InterPro: IPR000859; CUB_domain.
InterPro: IPR0000859; WSC.
InterPro: IPR000001; Kringle.
InterPro: IPR0011; CUB, 1.
Pfam; PF00431; CUB, 1.
Pfam; PF00451; Kringle; 1.
Pfam; PF00451; Kringle; 1.
PRINTS; PR00018; KRINGLE.
ProDom, PD000355; Kringle; 1.
SMART; SM0042; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                             KREMEN PROTEIN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT; 452 AA.
                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRINGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kremen protein 1 precursor (Kringle and the nose) (Dickkopf receptor).
                                                                                                                                                                                                                                                                                                   PROSITE, PSO1180; CUB; 1.
PROSITE, PSO0021; KRINGLE 1; 1.
PROSITE; PSSO070; KRINGLE 2; 1.
                                                                                                                                                                                                                                                                                                                                                        Wnt signaling pathway; Signal;
SIGNAL 19 PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .5-SEP-2003 (Rel. 42, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51869 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity coes 31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xenopodinae, Xenopus.
NCBL_TaxID=8355;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90 DVSPWCYV 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             473 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRM1 XENLA
Q90Y90:
                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
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(ISOFORM 1).

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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 CYEGNGHFYRGKASTDTM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                eye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30 CYTVŇĠADYRĠTQNQTSLDGGKPCLFWNE--TFQHPYNTLKYPNGEGGLGEHNYCRNPDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   096MÜB; Q9BY70; Q9UGS5; Q9UGU1; 28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last amotation update)
Kremen protein 1 precursor (Kringle-containing protein marking the RREMEN) OR KREMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    25; Indels
                                                                                                                                                                                                                                                                            KREMEN PROTEIN 1.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                50188 MW; ED24BCD1AF4564E2 CRC64;
                                                                                                                                                                                                                                                                                                         CYTOPLASMIC (POTENTIAL).
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                                                                                                  EMBL; AB070851; BAB64294.1; -.
InterPro; IPR000859; CUB_domain.
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
Pfam; PF00431; CUB; 1.
Pfam; PF00051; Kringle; 1.
Pfam; PF00018; Kringle; 1.
PRODOM; PD000395; Kringle; 1.
SMART; SM00042; CUB; 1.
SMART; SM00321; WSC; 1.
SWART; SM00321; WSC; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS010021; KRINGLE_1; 1.
PROSITE; PS00021; KRINGLE_2; 1.
PROSITE; PS00021; KRINGLE_2; 1.
PROSITE; PS00021; KRINGLE_2; 1.
PROSITE; PS00021; KRINGLE_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 31.0%; Score 158; DB 1; 44.1%; Pred. No. 8.4e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475 AA.
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9; Mismatches
SIMILARITY: Contains 1 kringle domain. SIMILARITY: Contains 1 WSC domain.
                                                                                                                                                                                                                                                                    POTENTIAL.
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Conservative
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3369
3390
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112
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215
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291
328
344
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                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
"Local 30; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 RRRPWCYV 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88 DVSPWCYI 95
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344
452 AA;
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370
391
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253
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KRM1 HUMAN
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No. Submitted T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura T., Nakamura Y., Nakamura N., Espandan M., Nakamura N., Satola M., Soulyama moto, Tra R., O. P., Satola M., Satola M., Satola M., Nakamura N., Satola M., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakamura N., Satola M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nakama M., Nak
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REVIEW.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 CYEGNGHFYRGKASTDTM--GRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VSD -> AIQDSEVTSLIWSQGQPRSI (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.6%; Score 156; DB 1; Length 475; 44.1%; Pred. No. 1.5e-10; ive 8; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                            KREMEN PROTEIN 1.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 30 MISSING (ÎN REF. 1).
206 206 I -> V (IN REF. 2).
475 AA; 51898 MW; B7E86FDB0F96A0A4 CRC64;
                                                                                                                                                                                                                                                                                                             Wnt signaling pathway; Signal; Transmembrane; Kringle; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                     (GLCNAC. . . ) (GLCNAC. . . ) (GLCNAC. . . ) (GLCNAC. . . ) (GLCNAC. . . ) (GLCNAC. . . )
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MISSING (ÎN REF. 1).
I -> V (IN REF. 2).
                                                                                              EMBL; AB059618; BAB40969.1; --
EMBL; AK056425; BAB71180.1; --
EMBL; AL021333; CAB62952.1; --
EMBL; AL021333; CAB62952.1; --
EMBL; AL021333; CAB62959.1; --
Genew; HGNC:17550; KREMENI.
GO; GO:0016021; C:integral to membrane; ISS.
GO; GO:0016021; C:integral to membrane; ISS.
GO; GO:0016021; C:integral to membrane; ISS.
GO; GO:0016021; C:integral to membrane; ISS.
GO; GO:0016021; P:cell communication; TAS.
InterPro; IPR00001; Kringle.
InterPro; IPR00431; CUB, in.
Pfam; PP00431; CUB; i.
Pfam; PP00621; Kringle; i.
Pfam; PP00621; Kringle; i.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
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 -!- SIMILARITY: Contains 1 WSC domain.
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                                                                                                                                                                                                                                                                                                                                                                                   KRINGLE
                                                                                                                                                                                                                                                                                PROSITE; PS01180; CUB; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
                                                                                                                                                                                                                                         PRINTS; PR00018; KRINGLE.
PRODOM: PD0000395; Kringle: 1.
SMART; SM00042; CUB; 1.
SMART; SM00130; KR; 1.
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                                                                                                                                                                                                                                                                                                                                                       394
415
415
116
202
323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30;
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P08519;
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DOMAIN
TRANSMEM
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CONFLICT
SEQUENCE
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DISEASE: Elevated plasma concentrations of apo(a) and its naturally occurring proteolytic fragments are correlated with naturally occurring proteolytic fragments are correlated with thought to underlie the atherogenicity of the protein, because the fragments are competing with plasminogen for fibrin(ogen) binding. MISCELLANEOUS: Apo(a) is known to be proteolytically cleaved, leading to the formation of the so called mini-lp(a). Apo(a) fragments accumulate in atherosclerotic lesions, where they may promote thrombogenesis. O-glycosylation may limit the extent of proteolytic fragmentation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              structures present in either a mono- or disialylated state. The O-glycans are mostly (80%) represented by the monosialylated core type I structure, NeuMaalpha2-3Galbeta1-3GalMac, with smaller amounts of disialylated and non-sialylated O-glycans also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      decorin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WEDLINE_95002201; pubMed=7918682; Scanu A.W., Pafafinger D., Lee J.C., Hinman J.; Scanu A.M., Pafafinger D., Lee J.C., Hinman J.; scanu A.M., Pafafinger D., Lee J.C., Hinman J.; subject and the point mutation (Txp72->Arg) in human apo(a) kringle 4-37 associated with a lysine binding defect in Lp(a)."; Biochin. Brophys. Acta 1227:445(1994).
-!- FUNCTION: Apo(a) is the main constituent of lipoprotein(a) (Lp(a)). It has serine proteinase activity and is able of autoproceolysis. Inhibits tissue-Type plasminogen activator 1. Lp(a) may be a liquad for megalin/Gp 330.
-!- SUBUNIT: Disulfide-linked to apo-B100. Binds to fibronectin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=96217891; PubMed=864259;
Mikol V., Lograsso P.V., Boettcher B.R.;
"Crystal structures of apolipoprotein(a) kringle IV37 free and
complexed with 6-aminohexanoic acid and with p-aminomethylbenzolc
acid: existence of novel and expected binding modes.";
J. Mol. Biol. 256:751-761(1996).
                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                          McLean J.W., Tomlison J.E., Kuang W.-J., Eaton D.L., Chen E.Y., Fless G.M., Scanu A.M., Lawn R.M.; "cDNA sequence of human apolipoprotein(a) is homologous to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-90076123; PubMed=2531657; Salonen E.-M., Jauhlainen M., Zardi L., Vaheri A., Ehnholm C.; Salonen E.-M., Jauhlainen M., Zardi L., Vaheri A., Ehnholm C.; "Lipoproteáind; binds to fibronectin and has serine proteinase activity capable of Cleaving it."; EMBO J. 8:4035-4040(1989).
15-SEP-2003 (Rel. 42, Last annotation update)
Apolipoprotein(a) precursor (EC 3.4.21.-) (Apo(a)) (Lp(a)).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     K-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS) OF 4121-4208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHARACTERIZATION OF THE N- AND O-LINKED GLYCANS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biol. Chem. 276:22200-22208(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The mysteries of lipoprotein(a).";
Science 246:904-910(1989).
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=88039109; Pubmed=3670400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=90049223; PubMed=2530631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 330:132-137(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SERINE PROTEASE ACTIVITY
                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT ARG-4193.
                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
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ACT SITE
ACT SITE
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                                                                                                                                                                                                              M. MIM, 1224200; -..

M. GO; GO:0004866; F:endopeptidase inhibitor activity; TAS.

M. GO; GO:0008015; P:circulation; TAS.

M. GO:0008015; P:circulation; TAS.

M. GO:0008015; P:circulation; TAS.

M. GO:0008015; F:pathogenesis; TAS.

InterPro; IPR001314; Chymotrypsin.

InterPro; IPR00124; Ser_protease_Try.

InterPro; IPR001254; Ser_protease_Try.

InterPro; IPR001254; Kringle; 38.

IPR00125; KRINGLE.

R. PR00125; KRINGLE.

R. PR00130; KRINGLE.

R. SMART; SM00130; KRINGLE.

R. SMART; SM00130; KRINGLE.

R. RART; SM00130; KRINGLE.

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R. RART; SM00130; KRINGLE.

R. RART; SM00130; KRINGLE.

R. RART; SM00130; KRINGLE.

R. RAGITE; PS00021; KRINGLE.

R. RAGITE; PS00031; KRINGLE.

R. RAGITE; PS00135; TRYPEIN_DOW; 1.

R. ROSITE; PS00135; TRYPEIN_HIS; 1.

R. RAGITE; PS00135; TRYPEIN_HIS; 1.

R. Hydrolase; Serine protease; Lipid transport; Plasma; Glycoprotein;

M. Kringle; Repeat; Atherosclerosis; Signal; Polymorphism; 3D-structure.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. PLASMINOGEN SUBFAMILY. SIMILARITY: Contains 38 kringle domains.
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                                                                                                                        PIR; S00657; S00657.
PDB; 1171; 13-UNN-01.
PDB; 1JFN; 28-UJN-02.
PDB; 1KIV; 18-MAY-99.
PDB; 3KIV; 18-MAY-99.
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Genew; HGNC:6667; LPA.
MIM; 152200; -.
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4122 RQCYHGNGQSYRGTFSTTVTGRTCQSWSSMTPHRHQRTPENYPNDGLTM-----NYCRNP 4176
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MEDLINE=94242782; PubMed=8186251;
MEDLINE=94242782; PubMed=8186251;
Shibuya Y., Semba U., Okabe H., Kambara T., Yamamoto T.;
Shibuya Y., Seructure of bovine Hageman factor (blood coagulation factor XII): comparison with human and guinea pig molecules.";
Biochim. Biophys. Acta 1206:63-70(1994).
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01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Coaquiation factor XII precursor (EC 3.4.21.38) (Hageman factor)
KRINGLE TYPE IV, 31.
KRINGLE TYPE IV, 32.
KRINGLE TYPE IV, 33.
KRINGLE TYPE IV, 34.
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SEQUENCE OF 10-21; 350-364 AND 525-550.
MEDLINE=77182112; PubMed=861210;
Fujikawa K., Walsh A.K., Davie W.E.;
"Isolation and characterization of bovine factor XII (Hageman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 30.6%; Score 156; DB 1; Length 4548; Best Local Similarity 37.8%; Pred. No. 1.6e-09; Matches 34; Conservative 12; Mismatches 32; Indels 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         501313 MW; 96921BE96A465C5F CRC64;
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          4548 AA;
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   FA12 BOVIN
ID FA12 BOVIN
AC P98140;
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"Identification of the rat Heymann nephritis autoantigen (GP330) as a receptor site for plasminogen.";

"Identification of the rat Heymann nephritis autoantigen (GP330) as a receptor site for plasminogen.";

"Biol. Chem. 266:10825-10829 (1991).

"Biol. Chem. 266:10825-10829 (1991).

"I Biol. Chem. 266:10825-10829 (1991).

"I BIOLICUN: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS A PROTED/YTY TO RAILETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOPMENT, TISSUB REMOBELING, TUMOR INVASION.

"AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE GRAFIAN FOLLICLE. IT ACTIVATES THE UROKINASE-TYPE PLASMINOGEN ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH ACTIVATOR, COLLAGENASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH CHANNIN AND VON WILLEBRAND FACTOR.

"I-MAININ AND VON WILLEBRAND FACTOR."

CHANTING AND CONTIVITY: Preferential cleavage: Lys-|-Xaa > Arg-|-Xaa;

CHANTING AND CATIVITY: Preferential cleavage: Lys-|-Xaa > Arg-|-Xaa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206 SCYDDRDRGLSYRGMAGTTLSGAPCQSWAS----BATYWNVTAEQVLNWGLGGDHAFCRNP
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ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOUND TO
FIBERIN. CANNOT BE ACTIVATED WITH STREPTOKINASE.
-!- MISCELLANEOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
IMMEDIATELY AFTER DISSOCIATION FROM THE CLOT.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
-!- SIMILARITY: Contains 5 kringle domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
    BY SIMILARITY.
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N-LINKED (GLCNAC. . . ) (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                   30.5%; Score 155.5; DB 1; Length 593; 38.4%; Pred. No. 2.2e-10; Live 9; Mismatches 37; Indels 7;
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721592BA792BD61F CRC64;
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01-APR-1993 (Rel. 25, Last sequence update)
18-FEB-2003 (Rel. 41, Last annotation update)
Plasminogen (EC 3.4.21.7) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262 DNDTRPWCFIWKGDRLSWNYCRLAPC 287
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                                                                                                                                                                                                                                                                                                                                          65148 MW;
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Matches 33, Conservative
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                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
SIMILARITY: Contains 2 EGF-11ke domains.
SIMILARITY: Contains 1 fibronectin type I domain.
SIMILARITY: Contains 1 fibronectin type II domain.
SIMILARITY: Contains 1 kringle domain.
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ALPHA-FACTOR XIIA LIGHT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EGF-LIKE 1.
FIBRONECTIN TYPE-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EGF-LIKE 2.
KRINGLE.
                                                                                                                                                                                                                                                                                                                                EMBL; S70164; AAB30804.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; S45281; S45281.
HSSP; P00763; 1DPO.
MEROPS; S01.211; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
94
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ACT_SITE
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261

28

Gaps

us-09-880-503-1.rsp

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9
modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQL---GLGKHNYCRNPD 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34 CYQGNGKSYRGTSSTTNTGKKCQSW-----VSMTPHSHSKTPANFPDSGL-EMNYCRNPD 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-85203906; PubMed=3846532; Schaller G.A.K., Rosselet S.J., Schaller U., Moser P.W., Dannegger-Muller G.A.K., Rosselet S.J., Kampfer U., Rickli E.E.; "Complete amino acid sequence of bovine plasminogen. Comparison with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Gaps
                                                                                                                                                        MEROPS; SO1.233; PWK.

MEROPS; SO1.233; PRO00306; Kringle.

InterPro; IPR000306; Prothrombin.

R InterPro; IPR000306; Prothrombin.

R InterPro; IPR000154; Ser_protease_Try.

Pfam; PR00018; KRINGLE.

R PRATT; SR00018; KRINGLE.

R SWART; SR000130; KRINGLE.

R PROSTTE; PS50020; KRINGLE.

R PROSTTE; PS50020; KRINGLE.

R PROSTTE; PS50010; KRINGLE.

R PROSTTE; PS50010; TRYPSIN_DOM; PARTIAL.

R PROSTTE; PS000130; TRYPSIN_HIS; PARTIAL.

R PROSTTE; PS00135; TRYPSIN_HIS; PARTIAL.

R PROSTTE; PS00135; TRYPSIN_HIS; PARTIAL.

R PROSTE; PS00135; TRYPSIN_HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN_HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN_HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

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R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PS00136; TRYPSIN HIS; PARTIAL.

R PROSTE; PROST
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Berglund D., Andersen M.D., Petersen T.E.; "Cloning and characterization of the bovine plasminogen cDNA."; Int. Dairy J. 5:593-603(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.3%; Score 149.5; DB 1; Length 169; 37.8%; Pred. No. 2.9e-10; ive 12; Mismatches 29; Indels 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRINGLE 3 (BY SIMILARITY).
KRINGLE 4 (BY SIMILARITY).
KRINGLE 5 (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169 AA; 18401 MW; 77A54214C49D010C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 27-812, AND CARBOHYDRATE-LINKAGE SITES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1998 (Rel. 06, Created)
01-JAN-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Plasminogen precursor (EC 3.4.21.7).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            812 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88 NDQRGPWCFT---TDPSVRWEYCNLKRCSE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 N-RRRPWCYVQVGLKPLV--QECMVHDCAD 86
                                                                                                  EMBL; M62832; AAA41884.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 37.89
Matches 34, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95
107
169
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112
>169
112
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human plasminogen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            taurus (Bovine).
                                                                                                                              PIR; A40522; A40522.
HSSP; P00747; 1PMK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLMN BOVIN PO6868; Q28162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                        MEDINE=8818529; PubMed=3356193;

A Marti T., Schaller J., Rickii E.E., Schmid K., Kamerling J.P.,

A Gerwig G.J., van Halbeek H., Vliegenthart J.F.;

Gerwig G.J., van Halbeek H., Vliegenthart J.F.;

The N- and O-linked carbohydrate chains of human, bovine and porcine
plasminogen. Species specificity in relation to sialylation and

throsylathon patterns...;

The N- and O-linked carbohydrate chains of human, bovine and porcine
tracosylation patterns...;

Eur. J. Blochem. 173:57-63 (1988).

- I- FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS

A PROTEOLYTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING

EMBRYONIC DEVELOPMENT, TISSUE REMOBELING, TUMOR INVASION,

AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE
GRAAFIAN POLICIES. IT ACTIVATES THE UNCKINASE-TYPE PLASMINOGEN

AS CI AND CS. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSFONDIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -:- ENZYME REGULATION: CONVERTED INTO PLASMIN BY PLASMINOGEN
ACTIVATORS, BOTH PLASMINOGEN AND ITS ACTIVATOR BEING BOUND TO
FIBRIN: CANNOT BE ACTIVATED WITH STREPTOKINASE.
-:- PTM: N-LINKED GLYCAN CONTAIN N-ACETYLLACTOSAMINE AND STALIC ACID.
O-LINKED GLYCANS CONSIST OF GAL-GALNAC DISACCHARIDE WITH IS
MODIFIED WITH UP TO 2 SIALIC ACID RESIDUES (MICROHETEROGENEITY).
-:- MISCELLAMBOUS: PLASMIN IS INACTIVATED BY ALPHA-2-ANTIPLASMIN
-:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI. PLASMINOGEN SUBFAMILY.
-:- SIMILARITY: CONTAINS 5 KrINGLE domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATALYTIC ACTIVITY: Preferential cleavage: Lys-|-Xaa > Arg-|-Xaa; higher selectivity than trypsin. Converts fibrin into soluble products.
                                                                                                       MEDLINE-85023311; PubMed=6148961;
Malinowski D.P., Sadler J.E., Davie E.W.;
"Characterization of a complementary deoxyribonucleic acid coding for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003609; Pan_app.
InterPro; IPR00366; Prothrombin.
InterPro; IPR001254; Ser protease_Try.
Ffam; PF00021; Kringle; S.
Pfam; PF00089; Lrygain; 1.
Pfam; PR00089; Lrygain; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAMININ AND VON WILLEBRAND FACTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProDom; PD000395; Kringle; 5.
SWART; SM00130; KR; 5.
SWART; SM00130; KR; 5.
SWART; SM00020; Tryp. SPC; 1.
PROSITE; PS00021; KRINGLE 1; 5.
PROSITE; PS50070; KRINGLE 2; 5.
PROSITE; PS50070; TRYPSIN DOM; 1.
PROSITE; PS500340; TRYPSIN DHS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlycoSuiteDB, P06868; -.
InterPro, IPR001314; Chymotrypsin.
InterPro, IPR000001; Kringle.
Eur. J. Biochem. 149:267-278(1985)
                                                                                                                                                                                                                                                        human and bovine plasminogen.";
Biochemistry 23:4243-4250(1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL, X79402, CAA55939.1; -.. EMBL, K02935; AAA30714.1; -.. PIN; S45046, PLBO.
HSSP, P00747; 2PK4.
MEROPS; S01.233; -..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR01505; PROTHROMBIN.
                                                                                 SEQUENCE OF 706-812 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYDRATE-LINKAGE SITES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro, IPR003014; PAN.
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Alternative splicing
384 CYHGNGQSYRGTSSTTITGRKCQSWSS-----MTPHRHLKTPENYPNAGL-TMNYCRNPD 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAH---RSDALQLGLGKHNYCRNPD 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8NCW0, Q8NCW1; Q96GL8; Q9HPP; Q8NCW1; Q96GL8; Q9HPP; Q8NCW0, Q8NCW1; Q96GL8; Q9HPP; Q8NCW0, Q8NCW1; Q96GL8; Q9HPP; Q9HPP; Q9HPP-2003 (Rel. 42, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update) Kremen procein 2 precursor (Kringle-containing protein marking the eye and the nose) (Dickkopf receptor 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 1.7e-09;
8; Mismatches 32; Indels 14; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORMS 3 AND 4).

TISSUE-Covarian carcinoma;

ISOSUE-TO COLA T., Nishikawa T., Hayashi K., Otsuki T., Sugiyama T.,

Suzuki Y., Nagai K., Nashama S., Ishii S., Kawai-Hio Y., Saito K.,

Yamamoto J., Wakamatsu A., Nakamura Y., Kojima S., Nagahari K.,

Masuho Y., Ono T., Okano K., Yoshikawa Y., Aotsuka S., Sasaki N.,

Hattori A., Okumura K., Iwayanagi T., Ninomiya K.;

"NEDO human cDNA sequencing project.";

Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
  PROSITE; PS00135; TRYPSIN SER; 1.
Hydrolase; Serine protease; Plasma; Glycoprotein; Fibrinolysis;
Tissue remodeling; Blood coagulation; Kringle; Zymogen; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tanaka S., Sugimachi K.;
"Human Kremen2 and Wnt signaling.";
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91216 MW; 38A6AA691E220946 CRC64;
                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. .).
/FTIG=CAR 000014.
O-LINKED (GALNAC. .).
                                                                                                          PLASMIN HEAVY CHAIN A. PLASMIN LIGHT CHAIN B.
                                                                                                                                                                                                                                                                                                                                CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                               N -> D (IN REF. 2).
Q -> H (IN REF. 2).
P -> L (IN REF. 2).
T -> R (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.2%; Score 149; DB 1;
                                                                                                                                                                                                                                                                                                                    /FTIG=CAR 000015
                                                                                                                                                                                                                                            SERINE PROTEASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   438 ADKSPWCYT --- TDPRVRWEFCNLKKCSE 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 NRRRPWCYVQVGLKPLV--QECMVHDCAD 86
                                                                                            PLASMINOGEN.
                                                                                                                                                                    KRINGLE 2.
KRINGLE 3.
KRINGLE 4.
KRINGLE 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORMS 3 AND 4).
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MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 39.3%;
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                          624
667
762
335
516
555
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359
461
564
312
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744
7812 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
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CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                             ACT_SITE
ACT_SITE
CONFLICT
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339
810 AA;
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59
                                                                                                                                                                                                                                                                                                                          |::|| || || : || || 36 CFQVNGADYRGHQNRTGPRGAGRPCLFWDQTQ--QHSYSSASDPHGRWGLGAHNFCRNPD 93
                                                                                                                                                                          /FTId=VSP_050511.
Missing (In isoform 3).
/FTId=VSP_050512.
ARVPSTVTAVGVLLILLIGILRPLRRRSCLLAP -> GEAG
ARDGSESGGRPLAPILITAAVCPQPGSSRR (in isoform
                                                                                                                         Missing (in isoform 2).
/FILG=VSP 050510.
ARVFSTVTAG=VSP 050510.
ARVFSTVTAG=VSVLLLLLGLILEPLRRRSCLLLAPGKGPPALG
ASRCPRSWAVWY -> GAVCWLREKGPRWGLPGAPGEAG
LCGTNSPEGWPCPAPPGTPRLVLPRATGL (in
                                                                                             SCLLAPGKGPPALGASRGPRRSWAVWYQQPR -> CGALGQ
GLRADRWWGAGAPEGNRARKELLGS (in isoform
                                                                                                                                                                                                                                                                                                               3 CYEGNGHFYRG---KASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Erinaceus europaeus (Western European hedgehog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Insectivora; Erinaceidae; Erinaceinae; Erinaceus.
NCBI_TaxID=9365;
                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96025778; PubMed=7592597;
Lawn R.M., Boonmark N.W., Schwartz K., Lindahl G.E., Wade D.P.,
Byrne C.D., Fong K.J., Meer K., Patthy L.;
"The recurring evolution of lipoprotein(a). Insights from cloning
                                                                            (GLCNAC. . .) (POTENTIAL). (GLCNAC. . .) (POTENTIAL).
                                                             (POTENTIAL).
                                                                                                                                                                                                                                                                                                  ..
O
                                                                                                                                                                                                                        /FTId=VSP 050513.
Missing (În isoform 4).
/FTId=VSP 050514.
Missing (În Ref. 2; BAC11365).
A -> D (in Ref. 2; BAC11365).
W; CE333015917A9AA68 CRC64;
                                                                                                                                                                                                                                                                                  DB 1; Length 462;
                                                                                                                                                                                                                                                                                                 26; Indels
      KREMEN PROTEIN 2.
EXTRACELLULAR (POTENTIAL).
                             CYTOPLASMIC (POTENTIAL).
                                                             (GLCNAC. . .)
                                                                                                                                                                                                                                                                                 29.1%; Score 148.5; DB 1
42.0%; Pred. No. 1.1e-09;
                                                                                                                    /FTId=VSP 050509.
                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
08-EBB-2003 (Rel. 41, Last annotation update)
Plasminogen precursor (EC 3.4.21.7).
                                                                                                                                                                                                                                                                                                                                                                                                        810 AA
                                                                                                                                                                                                                                                                                                9; Mismatches
                                                                                                                                                                     isoform 3)
POTENTIAL
                       POTENTIAL
                                                             N-LINKED
N-LINKED
                                                                             N-LINKED
N-LINKED
                                      KRINGLE
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94 GDVQPWCYV 102
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285 2
462 AA;
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Best Local Similarity
Matches 29; Conserv
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                                                                                                                                           367
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229485;
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CONFLICT
SEQUENCE
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CARBOHYD
               DOMAIN
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DOMAIN
SIGNAL
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PLMN ERIEU
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                          Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: PLASMIN DISSOLVES THE FIBRIN OF BLOOD CLOTS AND ACTS AS A PROTEOLYTIC FACTOR IN A VARIETY OF OTHER PROCESSES INCLUDING EMBRYONIC DEVELOPMENT. TISSUE REMODELING, TUMOR INVASION, AND INFLAMMATION; IN OVULATION IT WEAKENS THE WALLS OF THE GRAAPIAN FOLLICLE. IT ACTIVATES THE UROKINASE-TYPE PLASMINOGEN ACTIVATOR, COLLAGERASES AND SEVERAL COMPLEMENT ZYMOGENS, SUCH AS C1 AND C5. IT CLEAVES FIBRIN, FIBRONECTIN, THROMBOSPONDIN, LAMININA ND VON WHILEBRAND FACTOR.

-!- CATALYTIC ACTIVITY: Preferential cleavage: Lys-|-Xaa > Arg-|-Xaa; higher selectivity than trypsin. Converts fibrin into soluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY.
PLASMINOGEN.
PLASMIN HEAVY CHAIN A (BY SIMILARITY).
PLASMIN LIGHT CHAIN B (BY SIMILARITY).
SERINE PROTEASE.
KRINGLE 2.
KRINGLE 2.
KRINGLE 4.
KRINGLE 4.
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Hydrolase; Serine protease; Flasma; Glycoprotein; Fibrinolysis;
Tissue remodeling; Blood coagulation; Kringle; Zymogen; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (POTENTIAL)
8E75780946017A16 CRC64;
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InterPro; IPR003609; Pan app.
InterPro; IPR001254; Sar Drotease_Try.
Pfam; PF00021; Kringle; 5.
Pfam; PF00024; PAN; 1.
Pfam; PF00029; Lrypein; 1.
PRINTS; PR00122; CHYMOTRYPSIN.
PRINTS; PR00108; RRINGLE.
PRINTS; PR00108; RRINGLE.
PRINTS; PR00108; RRINGLE.
PRODOM; PD000395; Kringle; 5.
SMART; SM00130; KR; 5.
SMART; SM00020; Tryp. SPC; 1.
SMART; SM00020; Tryp. SPC; 1.
PROSITE; PS00021; KRINGLE 1; 5.
PROSITE; PS00021; KRINGLE 2; 5.
PROSITE; PS000240; TRYPSIN DOM; 1.
PROSITE; PS000240; TRYPSIN DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
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PIR; 146260; 146260.
HSSP; P00747; 1PMK.
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Best Local Similarity 41.5%; Pred. No. 1.9e-09;
Matches 27; Conservative 7; Mismatches 28; Indels 3; Gaps 1;
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g 25

63 RPWCY 67

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436 GPWCY 440

Search completed: December 3, 2003, 14:40:04 Job time: 3.82759 secs

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(without alignments)
1007.637 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                      - protein search, using sw model
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Maximum DB seq length: 2000000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

o			Description	Human urokinase-ty	Human uPA kringle	Human urokinase-ty	Human uPA amino te	Human colon cancer	Human ovarian anti	Delta 1-46 urokina	Human prourokinase	Bifunctional uroki
		í	10	AAE16542	AAE16550	AAE16545	AAE16549	AAG75492	ABP41795	AAR68854	AAW13635	AAR66266
			3 ;	23	23	23	23	22	23	16	11	16
		Query	rengtn	88	96	135	143	337	337	365	378	386
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		,	score	510	510	510	510	510	510	510	510	510
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man prourok functional	functional	irunctional	ifunctional				Bifunctional uroki										Bifunctional uroki	M36: fibrinolytic	Chimeric protein M	Chimeric protein M	Pro-urokinase deri	ifunctional	Α,	ifunctional	Bifunctional uroki	Human prourokinase	Human urokinase-ty	Prourokinase mutan	Prourokinase doubl		native pro	UK-S3 as encoded b	nase	Human pro-urokinas	
AAW13636 AAR66245	AAR66247	LO.	S	AAR66256	AAR66257	AAR66258	AAR66259	AAR66260	AAR66261	AAR66263	AAR66264	AAR66244	AAR66249	AAR66250	AAR66251	AAR66252	AAR66253	AAR99885	AAR99596	AAR99597	AAR47902	AAR66262	9	4	4	m	AAE16547	AAR23794	g,	AAP50871	AAW13634	AAR05117	524	AAR07902	
11	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	17	11	17	15	16	16	16	16	11	53	13	13	y	11	1	11	11	
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## ALIGNMENTS

AAE16542 standard; Protein; 88 AA. (first entry) 09-APR-2002 AAE16542; RESULT 1 AAE16542 DX LI X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X X B X

Human urokinase-type plasminogen activator (uPA) kringle.

stroke; hypotension; atherosclerosis; heart attack; thrombotic disorder; microvascular occlusion; angiogenic disorder; pulmonary fibrosis; asthma; tumour cell metastasis; glaucoma; diabetic retinopathy; wound healing; clotting disorder; uterine contraction disorder; respiratory disease; male impotence; adult respiratory distress syndrome. Human; urokinase-type plasminogen activator; uPA; therapy; hypertension; WO200197752-A2. Homo sapiens. 27-DEC-2001.

13-JUN-2001; 2001WO-US18976.

20-JUN-2000; 2000US-212874P.

(UYPE-) UNIV PENNSYLVANIA.

Cines DB, Higazi AA;

WPI; 2002-122240/16.

Thu Dec

us-09-880-503-1.rag

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stroke, hypotennion; atherosclerosis; heart attack; thrombotic disorder; microvascular occlusion; angiogenic disorder; pulmonary fibrosis; asthma; tumour cell metastasis; glaucoma; diabetic retinopathy; wound healing; clotting disorder; uterine contraction disorder; respiratory disease; adult respiratory distress syndrome; male impotence.
                                                                                                                                                                                                                                                                                                                           urokinase-type plasminogen activator (upA). The composition is used to modulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microangiopathies, surgically induced thrombotic disorders, angiogenic disorders, pulmonary fibrosis, asthma, tumour cell angiogenesis, tumour cell metastrasis, glaucoma, diabetic retinopathy, wound healing, clotting disorder, trerine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distease syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder associated with chronic intrapulmonary fibrin formation. The present sequence is human urokinase-type plasminogen activator (uPA) kringle.
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                                                                                                                                                                                                                                                                                                      invention relates to a composition comprising one or more domains of
                                                              Composition for modulating muscle cell and tissue contractility for treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 510; DB 23;
100.0%; Pred. No. 1.1e-41;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                               Claim 1; Fig 1A; 117pp; English.
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N-PSDB; AAD27075.
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The invention relates to a composition comprising one or more domains of urckinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microangiopathies, surgically induced thrombotic disorders, pulmonary fibrosis, asthma, tumour cell invasion, tumour cell angiogenesis, tumour cell metastasis, glaucoma, diabetic retinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distress syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder associated with chronic intrapulmonary fibrin formation. The present
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treating atherosclerosis, asthma, hypertension, glaucoma, impotence, comprising domains from urokinase-type plasminogen activator -
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                                                               Claim 25, Fig 11; 117pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                              and connecting peptide.
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Length 88; Indels

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The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to modulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular occlusions, thrombotic microrangiopathies, surgically induced thrombotic disorders, angiogenic disorders, pulmonary fibrosis, asthma, tumour cell invasion, tumour cell angiogenesis, tumour cell metastasis, glaucoma, diabetic retinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distress syndrome, primary pulmonary hypertension, microvascular thrombotic occlusion, and a disorder sequence is human urokinase-type plasminogen activator (uPA) amino
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comprising domains from urokinase-type plasminogen activator
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                                   Claim 11; Fig 1D; 117pp; English
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Best Local Similarity
Matches 88; Conserv
                                                                                                                                                                                                                                                                                                                                                                                135 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAD27082.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             male impotence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
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                                                                                                                                                                                                                                                                                                                                                                                  Seguence
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The invention relates to a composition comprising one or more domains of urokinase-type plasminogen activator (uPA). The composition is used to madulate the contractility and angiogenic activity of a mammalian muscle, endothelial cell or tissue. The composition is used for treating stroke, hypotension, hypertension, atherosclerosis, heart attack, microvascular coclusions, thrombotic microangiopathies, surgically induced thrombotic disorders, angiogenic disorders, pulmonary fibrosis, asthma, tumour cell invasion, tumour cell angiogenesis, tumour cell metastasis, glaucoma, catabetic retinopathy, wound healing, clotting disorder, uterine contraction disorder, male impotence, respiratory disease or condition such as asthma, adult respiratory distress syndrome, primary pulmonary Compraction disorder male impotence, respiratory disease or condition associated with chronic intrapulmonary fibrin formation. The present sequence is human urokinase-type plasminogen activator (uPA) amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                          KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers -
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; colon cancer; colon cancer antigen; diagnosis; detection; colorectal carcinoma; chromosome 10.
                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                 Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human colon cancer antigen protein SEQ ID NO:6256.
                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 510; DB 23; 100.0%; Pred. No. 1.8e-41;
                                                                                                                                                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Page 7707-7708; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAG75492 standard; Protein; 337 AA.
                  claim 24; Fig 1H; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                100.001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-SEP-2000; 2000WO-US26524.
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99US-0163280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
1es 88; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ruben SM, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-235357/24.
N-PSDB; AAH34897.
                                                                                                                                                                                                                                                                                                                                 143 AA;
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                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48
                                                                                                                                                                                                                                                                                                                                                                 Query Match
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Claim 11; SEQ ID No 2927; 2922pp; English.

neurological diseases

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cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P Additionally, N may be used to produce the colon cancer associated Ps, by inserting the mucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. Additional diagnosis and AAB77789 represent sequences used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 KTCYEGNGHPYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ovarian cancer; breast cancer; tumour; reproductive system disorder, infertility; pregnancy disorder; anovulation; polycystic ovary syndrome; PCOS; ovarian cyst; dysmenorrhoea; endocrine disorder; infection; inflammatory condition; immune disorder; blood disorder; infection; cardiovascular disorder; respiratory disorder; neurological disorder; gastrointestinal disorder; urinary system disorder; drug screening; gene therapy; chromosome mapping; forensic analysis; antibody preparation; cytostatic; immunomodulatory; neuroprotective; antiinflammatory; gynaecological; reproductive; chromosome 10024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolated nucleic acid molecules encoding novel ovarian polypeptides, useful in the prevention, treatment and diagnosis of cancer (e.g. ovarian cancer), immune disorders, cardiovascular disorders and
                                                                                                                                                                                                                                                        present invention.

N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present SEQ ID NO:1027 to 1052, 7921 and 7922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; ovarian antigen; ovary; ovarian; breast; cancer; tumour;
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 510; DB 22; Length 337; 100.0%; Pred. No. 4e-41; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human ovarian antigen HVVCB79, SEQ ID NO:2927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134 RRRPWCYVQVGLKPLVQECMVHDCADGK 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABP41795 standard; Protein; 337 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-JUN-2000; 2000US-209467P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-JUN-2001; 2001WO-US18569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birse CE, Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-147878/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 88; Conserv
                                                                                                                                                                                                                                                                                                                                                                      337 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; ABQ54872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200200677-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-AUG-2002
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                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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The invention relates to 2175 novel human ovarian antigens (ABP41054-ABP43228) and to cDNAs encoding them (ABQ54131-ABQ56305), and also cencempasses polypeptides 90% identical and polyuacleotides 95% identical to the sequences of the invention. The invention additionally relates to recombinant vectors and host cells comprising human ovarian antigens of ovarian antigens, and the use of ovarian polynucleotides and polypeptides in diagnosing, treating, prognosing or preventing various ovary and/or breast-related disorders. Such conditions include ovarian cancer and breast cancer, and metastatic tumours of ovarian or breast origin, reproductive system of polycypetic ovary syndrome, ovarian cancer and dysmenorrhoea), endocrine of isorders (e.g., infertility, disorders of pregnancy, anovulation, polycypetic ovary syndrome, ovarian cysts, and dysmenorrhoea), endocrine disorders, infertients (e.g., chlamydia, HIV, toxoplasmosis, and toxic shock syndrome), inflammatory conditions (e.g., mastitis, cophoritis and vajuntalis), immune disorders (e.g., anaemia), cardiovascular disorders (immunodeficiencies, autoimmune oophoritis, systemic lupus erythematosus), blood-related disorders, neurological disorders, gastrointestinal disorders and urinary system disorders. Ovarian antigen polypeptides and modulate ovarian antigen polypeptides may the modulate ovarian antigen polypeptides may the compounds which the therapy, chromosome mapping, in the contractive or dentification of individuals and in forensic analysis, and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptides may be used as food additives or to prepare antibodies useful in disease diagnosis, drug targeting and phenotyping. The present sequence represents a human ovarian antigen of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human, des-epidermal growth factor homologous plasminogen activator; uPA; liver membrane; reduced affinity; EGF homologous; thrombosis; thrombolytic; increased half-life; urokinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "amino acids 1-46 of wild-type urokinase have been deleted"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 510; DB 23; Length 337; 100.0%; Pred. No. 4e-41; tive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134 RRRPWCYVQVGLKPLVQBCMVHDCADGK 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR68854 standard; protein; 365 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (engineered).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Delta 1-46 urokinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 337 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
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22-NOV-1995
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90EP-0109472
                                                                                                                                          WPI; 1990-350146/47.
                                                                                                                                                                                                                                                                                                                                                                                                     378 AA;
                                                                                                                                                      N-PSDB; AAT61672
                                                                                                                                                                                                                                                                                                                                                                                respectively).
                                                                                      (GREC ) GREEN
    18-MAY-1990;
                                                     18-FEB-1987;
18-MAY-1989;
                                   18-MAY-1989;
                        22-FEB-1990;
                                             03-JUL-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
17-AUG-1995
                                                                                                         Airmura H,
                                                                                                                     Morita M,
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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Region
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                                                                                                                                                                                                                                                                                                                                                                                                       2 KICYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; prourokinase; hPUK; variant; half-life; increase; EGF; epidermal growth factor domain; deletion; thrombolysis; fibrinolysis.
                                                                                                                                                                                                Amino acid residues 1-46 contain the EGF region of human urokinase. Deletion of this region results in a plasminogen activator with reduced affinity for liver cell membranes; the mutant protein is not cleared from the circulation as rapidly as is wild-type tpA. The specification only gives the sequence around the deletion and not the full-length sequence of "delta 1-46 urokinase"; the sequence in AAR68884 has been obtained by amending a previously disclosed wild-type human urokinase sequence (from W09501427) according to the description given in Example 3. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                     New modified plasminogen activator cpds. - having regions removed to reduce affinity for liver membranes and increase circulation half-life.
                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                             Length 365;
                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note= "residues 43-411 of native hPUK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human prourokinase variant lacking entire EGF domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "residues 1-9 of native hPUK"
                                                                                                                                                                                                                                                                                                                                          100.0%; Score 510; DB 16; 100.0%; Pred. No. 4.3e-41;
                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "corresponds to TAC codon"
                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RRRPWCYVQVGLKPLVQECMVHDCADGK 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW13635 standard; Protein; 378 AA
                                                                       (AMHP ) AMERICAN HOME PROD CORP
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                                                                                                                                                                               Claim 1; Page ?; 26pp; English.
                     88US-0150267
                                        87US-0008795
                                                   88US-0150267.
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                                                                                                                                                                                                                                                                                                                                                               88; Conservative
                                                                                          Hung PP, Kalyan NK,
                                                                                                                 WPI; 1995-043464/06.
                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                       365 AA;
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                    29-JAN-1988;
                                                   29-JAN-1988;
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Synthetic.
27-DEC-1994
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                                                                                                                                                                                                                                                                                                                       Sequence
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New variants of human prounckinase (hPUK) comprise a hPUK deficient in (i) at least part of the first loop region of the epidermal growth factor (EGF) domain; (ii) at least part of the first loop and at least part of the second loop; or (iii) at least part of the third loop. The hPUK variants show an increased blood half-life comparable to that of the whole EGF domain-deficient hPUK variant and urokinase while retaining the same properties as those of hPUK. They have potent thrombolytic activity and very little tendency to cause spontaneous bleeding. The present sequence represents a specific variant of hPUK which lacks the entire EGF domain; the sequence does not appear in the specification and has been created using the wild-type hPUK sequence and the junction sequence after deflection, both of which are given (in Fig 1 and in Fig 2(3),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 KTCYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "unglycosylated prourokinase(Ser47-Leu411)"
4..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human pro-urokinase variants - deficient in loop regions c
epidermal growth factor, showing long blood half-life, as
fibrinolytic agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                          Amatsuji Y, Hirose M, Kasai S, Kawabe H;
Tanabe T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 510; DB 11;
Pred. No. 4.5e-41;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR66266 standard; protein; 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page -; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                       89JP-0126433.
86JP-0156936.
87JP-0036495.
89JP-0126434.
90JP-0042020
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/label= M4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (updated)
(first entry)
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Best Local Similarity 100.0
Matches 88; Conservative
                                                                                                                                                                                                                                                                             CROSS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE HEAVEN WAS AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND THE HEAVEN AND TH
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Location/Qualifiers
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                                                                                                                                                                                                                                                89JP-0126433.
86JP-0156936.
87JP-0036495.
                                                                                                                                                                                                           90EP-0109472
                                                                                                                                                                                                                                     90JP-0042020
                                                                                                                                                                                                                                                                                         89JP-0126434
                                                                                                                                                                                                                                                                                                                    (GREC ) GREEN CROSS CORP.
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                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1990-350146/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389 AA;
                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAT61673
                                                                                                             Misc-difference
 Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                18-MAY-1989;
03-JUL-1986;
18-FEB-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                respectively)
                                                                                                                                                                                                           18-MAY-1990;
                                                                                                                                                                               22-NOV-1990.
                                                                                                                                                                                                                                                                                          L8-MAY-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88;
                                                                                                                                                   EP398361-A
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                                                                                                                                                                                                                                                                                                                                                               Morita M,
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                                                        Region
                                                                                  Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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                                         Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 KTCYEGNGHFYRGKASTDIWGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKGKHNYCRNPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; prourokinase; hPUK; variant; half-life; increase; BGF;
epidermal growth factor domain; deletion; thrombolysis; fibrinolysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derivs. which have both improved fibrinolytic and thrombin inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bifunctional urokinase derivatives corresponding to the formula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                 New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 386;
                                                                                                                                                                                                                                                                                                                                Heinzel-Wieland R, Saunders DJ, Schneider J, Steffens GJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human prourokinase variant lacking EGF domain loops 1 and 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 510; DB 16; Best Local Similarity 100.0%; Pred. No. 4.6e-41; Matches 88; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 11 and Fig 1; 34pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRRPWCYVQVGLKPLVQECMVHDCADGK 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                     143..159
151..222
277..316
279..295
365..346
/label= X1
/note= "peptide bond"
366..386
/label= Y1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW13636 standard; Protein; 389 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                    (CHEF ) GRUENENTHAL GMBH
                                                                                                                                                                                                                                                                                                                                                                       WPI; 1995-015191/03.
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Disulfide-bond
Disulfide-bond
Disulfide-bond
Disulfide-bond
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Disulfide-bond
Disulfide-bond
                                                                                                                                                                                            DE4323754-C1
                                                                                                                                                                                                                                                15-JUL-1993;
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                                                                                                                                                                                                                     01-DEC-1994
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                                                                                                                                                                                                                                                                                                                                                Wnendt S;
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                                                                                                            Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New variants of human prourokinase (hPUK) comprise a hPUK deficient in (i) at least part of the first loop region of the epidermal growth factor (EGF) domain, (ii) at least part of the first loop and at least part of the second loop; or (iii) at least part of the third loop. The hPUK variants show an increased blood half-life comparable to that of the whole EGF domain-deficient hPUK variant and urokinase while retaining the same properties as those of hPUK. They have potent thrombolytic activity and very little tendency to cause spontaneous bleeding. The present sequence represents a specific sequence does not appear in the specification and has been created using the wild-type hPUK sequence and the junction sequenc retaited deletion, both of which are given (in Fig 1 and on page 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 KTCYEGNGHPYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human pro-urokinase variants - deficient in loop regions oepidermal growth factor, showing long blood half-life, as fibrinolytic agent
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                              11..389
/note= "residues 33-411 of native hPUK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawabe H;
'note= "residues 1-10 of native hPUK"
                                                                                                                                  /note= "corresponds to TAC codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 510; DB 11;
100.0%; Pred. No. 4.6e-41;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amatsuji Y, Hirose M, Kasai S,
Tanabe T;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR66245 standard; protein; 390 AA
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Disulfide-bond
Disulfide-bond
Disulfide-bond
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                                                                                                          fibrinolysis;
                                                                                                                                                                                                                                                                                                                     DE4323754-C1.
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                                                                                                                                                                                                                                                                                                                                                                          15-JUL-1993;
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                                                            25-MAR-2003
17-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88;
                                                                                                                                                                                         Disulfide-1
Disulfide-1
                                                                                                                                                                                                                    Disulfide-b
Disulfide-b
                                                                                                                                                                                                           Disulfide-
                                                                                                                                    Synthetic.
                                            AAR66247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                      Key
Region
                                                                                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                                                                            Region
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Matches
        RESULT 12
                  AAR66247
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KICYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                             Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AR66244-R66266 are specific examples of such derivs. Which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                  /note= "unglycosylated prourokinase(Ser47-Leu411)"
                                        fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic;
urokinase; variant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                         New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 510; DB 16; Length 390; 100.0%; Pred. No. 4.6e-41; ive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                              Steffens GJ;
                                                                                                                                                                                                                                                                                                                                            Schneider J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and pulmonary embolism. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                        Location/Qualifiers
                          Bifunctional urokinase variant M12
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/label= X1
372..390
/label= Y1
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/label= M4
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derivs. which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "unglycosylated prourokinase(Ser47-Leu411)"
                                                                                                                                                                                                                                          thrombin inhibition; thrombolytic; anti-thrombotic;
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AAR66247 standard; protein; 390 AA.
                                                                                                                                                                                     Bifunctional urokinase variant M14.
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/label= X1
372..390
/label= Y1
                                                                                                                                                                                                                                                                         urokinase, variant, mutein
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306..334
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17-AUG-1995
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                                                                                                                                                                                                                                                                                                                                     /label= M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
                                                                                                                                                                                                                                           fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic; urokinase; variant; mutein.
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                                          61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                     62 RRRPWCYVQVGLKPLVQECMVHDCADGK 89
                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                       Bifunctional urokinase variant M21.
                                                                                                                                 AAR66254 standard; protein; 392 AA.
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/label= Yl
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                                                                                                    1 KTCYEGNGHEYRGKASTDTWGRPCLPWNSATVLQOTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                      2 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 61
                                                        0; Gaps
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/label= "unglycosylated prourokinase(Ser47-Leu411)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic; urokinase; variant; mutein.
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Ouery Match 100.0%; Score 510; DB 16; Length 392; Best Local Similarity 100.0%; Pred. No. 4.6e-41; Matches 88; Conservative 0; Mismatches 0; Indels 0;
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                                                                                                                                                                                                        61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                           62 RRRPWCYVQVGLKPLVQECMVHDCADGK 89
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1..365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bifunctional urokinase variant M22.
                                                                                                                                                                                                                                                                                                                                                                                     AAR66255 standard; protein; 392 AA.
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/label= X1
372..392
/label= Y1
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(first entry)
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KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 61
                                        M4-XI-YI are claimed (see features table). Sequences AAR66244-R66266 flores specific examples of such derive. which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vain thrombosis, cardiac and cerebral infarction and pulmonary embolism.
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  treating cardiac and cerebral infarct, pulmonary embolism,
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                                                                                                                                                                                ; Score 510; DB 16;
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0; Mismatches 0;
                       Example 1; Page 10 and Fig 1; 34pp; German.
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                                                                                                                                                                                                                                                                      61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                           KRRPWCYVQVGLKPLVQECMVHDCADGK
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                                                                                                                                                                                                                                                                                                                                                  AAR66257 standard; protein; 392 AA
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                                                                                                                                                                                100.0%;
100.0%;
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/label= Yl
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/label= M4
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/label= X1
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Best Local Similarity 100.
Matches 88; Conservative
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fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.

(Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                                                                                                                                                                                                                     fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic;
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                                                                                                100.0%; Score 510; DB 16; 100.0%; Pred. No. 4.6e-41;
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                                                                                                                                                                                                             89
                                                                                                                                                                                                            RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                Bifunctional urokinase variant M23.
                                                                                                                                                                                                                                                                    AAR66256 standard; protein; 392 AA.
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/label=_M4
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372..392
/label= Y1
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247..316
279..295
306..334
                                                                                                                       88; Conservative
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                                                                                                             Best Local Similarity
                                                                             392 AA;
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                                                                              Sequence
                                                                                                                                                                                                                                                                                          AAR66256;
                                                                                                   Query Match
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1 KTCYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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                                                                                                                                                                                                                                                                                                                      Bifunctional urokinase derivatives corresponding to the formula M4-XY1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derive, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                                                                 New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 510; DB 16; Length 392;
ilarity 100.0%; Pred. No. 4.66-41;
Conservative 0; Mismatches 0; Indels 0;
                                                                                                                         Schneider J, Steffens GJ;
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                                                                                                                            Heinzel-Wieland R, Saunders DJ,
                                                  93DE-4323754,
                93DE-4323754.
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es 88; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKGHNYCRNPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                                                                          Bifunctional urokinase derivatives corresponding to the formula M4-XY1 are claimed (see features table). Sequences AAR6524-R66266 are specific examples of such derivs, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction (Updated on 25-WAR-2003 to correct PN field.)
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1..365 M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
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                                                                                     New bifunctional urokinase derivs and related plasmids - with improved dibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                  h Similarity 100.0%; Score 510; DB 16; Length 392; I Similarity 100.0%; Predo No. 4.6e-41; PR 88; Conservative O; Mismatches O; Indels O;
unders DJ, Schneider J, Steffens GJ;
                                                                                                                                                         Example 1; Page 11 and Fig 1; 34pp; German.
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(first entry)
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/label= X1
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                                                                                                                                                                                                                      Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derives, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.
(Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                           Schneider J, Steffens GJ;
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1..365
/label= M4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 urokinase variant M27.
                                                                                                                          Saunders DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR66260 standard; protein; 392
                                                                       93DE-4323754
                                                                                       93DE-4323754
/label= X1
372..392
/label= Y1
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(first entry)
                                                                                                                                                                                                                                                                                                                                                    88; Conservative
                                                                                                        (CHEF ) GRUENENTHAL GMBH
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56..80
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                                                                                                                          Heinzel-Wieland R,
                                                                                                                                                                                                                                                                                                                                          Local Similarity
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17-AUG-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derivs. which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction
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Pred. No. 4.6e-41;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schneider J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and pulmonary embolism. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR66261 standard; protein; 392
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                       151..222
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366..371
/label= X1
372..392
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Disulfide-bond
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Bifunctional urokinase variant M30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AAR66246 are specific examples of sauch deriva: which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial and pulmonary embolism.
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                                     /note= "unglycosylated prourokinase(Ser47-Leu411)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 392;
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100.0%; Pred. No. 4.6e-41;
ive 0; Mismatches 0;
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     Location/Qualifiers
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Best Local Similarity luv..
Best Local 88; Conservative
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/label= M4
                                                                                                          151..222
247..316
279..295
306..334
366..371
                                                                                                                                                                                                                                                                                                                  (CHEF ) GRUENENTHAL GMBH.
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                                                Disulfide-bond
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7-AUG-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bifunctional urokinase derivatives corresponding to the formula MA-171 are claimed (see features table). Sequences AR866244-R66266 are specific examples of such derivs. Which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction
                                                                                                                                                    1..365
/label= M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
fibrinolygis; thrombin inhibition; thrombolytic; anti-thrombotic; urokinase; variant; mutein.
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100.0%; Pred. No. 4.6e-41;
ive 0; Mismatches 0;
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                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saunders DJ,
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/label= Y1
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Best Local Similarity 100.
Matches 88; Conservative
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279..295
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RRRPWCYVQVGLKPLVQECMVHDCADGK
RRRPWCYVQVGLKPLVQECMVHDCADGK
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                                                                                                                                                                       1.365
/label= M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
4.85
                                                                                                   fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 392;
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100.0%; Pred. No. 4.6e-41;
iive 0; Mismatches 0;
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                                                                                                                                                           Location/Qualifiers
                                                                               urokinase variant M31.
 standard; protein; 392 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Saunders
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372..392
                                                                                                                 urokinase; variant; mutein.
                                             (updated)
(first entry)
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Best Local Similarity 100.0
Matches 88; Conservative
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                                                                                Bifunctional
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                                             25-MAR-2003
17-AUG-1995
                                                                                                                                        Synthetic.
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                         AAR66264;
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M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derivs. which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction
                                                                                                                                                                       1..365
/label= M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
                                                                                                 fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic; urokinase; variant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 16; Length 393;
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                                                                              urokinase variant M11.
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AAR66244 standard; protein; 393
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375..393
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                                            (updated)
(first entry)
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KTCYEGNGHFYRGKASIDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDN 61 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN

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Gaps

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Length 393;

DB 16; ö 61

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1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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4..85
     occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.
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                                                                                                               Score 510; DB 16;
Pred. No. 4.7e-41;
0; Mismatches 0;
                                        (Updated on 25-MAR-2003 to correct PN field.)
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ilarity 100.0%;
Conservative 0
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/label= M4
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(first entry)
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Matches 88; (
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17-AUG-1995
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                                                         1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                       2 KTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKGKHNYCRNPDN
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                           Gaps
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|Jabel= M4
|note= "unglycosylated prourokinase(Ser47-Leu411)"
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                           Indels
           Pred. No. 4.7e-41;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schneider J,
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                                                                                                                                     88
                                                                                                                                                                     89
                                                                                                                                     61 RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                 RRRPWCYVQVGLKPLVQECMVHDCADGK
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                                                                                                                                                                                                                                                                                                                                                                                   urokinase variant M16.
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100.0%; Fr. 0;
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373.393
/label= Y1
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                             Conservative
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17-AUG-1995
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Steffens GJ;

Schneider J,

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                                                                                                                                                        Bifunctional urokinase derivatives corresponding to the formula M4-XL-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of setting derive, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial and pulmonary embolism.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic; urokinase; variant; mutein.
                                  New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                             Length 393;
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ilarity 100.0%; Pred. No. 4.7e-41;
Conservative 0; Mismatches 0;
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                                                                                                                      Example 1; Page 10 and Fig 1; 34pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
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/label= M4
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/label= Y1
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WPI; 1995-015191/03
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                                                                                                                                                                                                                                                                                                          Gaps
                   Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derives, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction and pulmonary embolism.

(Updated on 25-MAR-2003 to correct PN field.)
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/label= M4
/note= "unglycosylated prourokinase(Ser47-Leu411)"
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100.0%; Pred. No. 4.7e-41;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                              Bifunctional urokinase derivatives corresponding to the formula M4-X1-Y1 are claimed (see features table). Sequences AAR66244-R66266 are specific examples of such derivs. Which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The proteins are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thrombin, factor Xa; anticoagulant; thrombolytic; plasminogen; urokinase; activator; streptokinase; staphylokinase; APSAC; anisolated plasminogen streptokinase activator complex; hirudin; hirullin; antiscatin; pWL127; pWS1; pSE8; pHWS6.
                                                                                                                                                                                                                                                                                              improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 510; DB 16; Length 393; 100.0%; Pred. No. 4.7e-41; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                           bifunctional urokinase derivs and related plasmids - with
                                                                                                                                                                                       Steffens GJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M36: fibrinolytic and anticoagulant activity contg. protein.
                                                                                                                                                                                         Schneider J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and pulmonary embolism. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 10 and Fig 1; 34pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRRPWCYVQVGLKPLVQECMVHDCADGK 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR99885 standard; peptide; 393 AA
                                                                                                                                                                                         Heinzel-Wieland R, Saunders DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94DE-4440892.
                                                                                    93DE-4323754.
                                                                                                                     93DE-4323754.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CHEF ) GRUENENTHAL GMBH.
                                                                                                                                                        (CHEF ) GRUENENTHAL GMBH.
                                                                                                                                                                                                                                              WPI; 1995-015191/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393 AA;
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                                                                                    15-JUL-1993;
                                                                                                                     15-JUL-1993;
              DE4323754-C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-JAN-1997
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                                                 01-DEC-1994
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 KTCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                           M4-XI-YI are claimed (see features table). Sequences AAR66244.R66266 are specific examples of such derivs, which have both improved fibrinolytic and thrombin-inhibiting activities, compared to known plasminogen activators or thrombin inhibitors. The protains are useful as thrombolytic agents, e.g. for treatment of arterial occlusions, deep vein thrombosis, cardiac and cerebral infarction (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note= "unglycosylated prourokinase(Ser47-Leu411)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fibrinolysis; thrombin inhibition; thrombolytic; anti-thrombotic;
                                                                                                                                                                                                                                                                Bifunctional urokinase derivatives corresponding to the formula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ·
0
                                                                                                                                                        New bifunctional urokinase derivs and related plasmids - with improved fibrinolytic and thrombin inhibiting activities, for treating cardiac and cerebral infarct, pulmonary embolism, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 393;
                                                                     Steffens GJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 510; DB 16;
100.0%; Pred. No. 4.7e-41;
ive 0; Mismatches 0;
                                                                     Schneider J,
                                                                                                                                                                                                                               Example 1; Page 10 and Fig 1; 34pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RRRPWCYVQVGLKPLVQECMVHDCADGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bifunctional urokinase variant M20.
                                                                       Saunders DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR66253 standard; protein; 393
     93DE-4323754.
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151..222
279..316
279..334
306..334
366..372
1373..393
/label= Yl
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/label= M4
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(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     urokinase; variant; mutein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 100.
Les 88; Conservative
                                      (CHEF ) GRUENENTHAL GMBH.
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25.67
56.80
                                                                                                                         WPI; 1995-015191/03.
                                                                         Heinzel-Wieland R,
                                                                                                                                                                                                                                                                                                                                                                                                                                           393 AA;
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Disulfide-bond
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     15-JUL-1993;
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17-AUG-1995
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Key

9 61

Gaps

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                  30-NOV-1994;
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                                                                                                                                                                                                                                                                                         Mare Time Por V; T2 = L or a bond; T3= Q or OH.

(A) is pref. (pro)urokinase; tissue plasminogen activator (tpA),
bat-PA (all opt. modified by deletion, substitution, insertion and/or
addn.); streeptokinase; staphylokinase; and/or APSAC (anisolated
plasminogen streeptokinase activator complex), esp. prourokinase
(411 amino acids) or its Ser47 to Leu411 or Ser138 to Leu411
fragments, or t-PA (527 amino acids) or its Ser89Arg to 527Pro or
144Ser to 527Pro fragments and/or the tick anticoagulant peptide.
(B) has hirudin or hirullin activities; or is derived from the human throughn receptor, antistatin and/or the tick anticoagulant peptide.
Most pref. are the 65 amino acid hirudin sequence or one of the six sequences given in AAR99879 to AAR99888.
Contain the sequences encoding AAR99885 to AAR99884 respectively.
Plasmids pWLT27 (M51), pW31 (M112), pS58 (M36) and pHW56 (M43)
contain the sequences encoding AAR99885 to AAR99888, respectively.
The products were tested in human citrated plasma (5 microg in 200 microl 1:10 diluted plasma). The thrombin time was then 1.2, 3, 2.8
and 1.2 times greater, repectively, than in the absence of the product.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                            Proteins with fibrinolytic and anticoagulant activity - useful as
                                                                                                                                                   New peptides (I) with fibrinolytic and anticoagulant activity comprise a plasminogen-activating amino acid sequence (A) fused at the N- and/or C-terminus to a thrombin and/or factor Xa inhibiting amino acid sequence (B). Excluded from the claims are (I) where (A) is Ser47 to Leu411 of unglycosylated urokinase linked at the C-terminus to sequences (i) to (iii):
TI-RP-T2-GGGGGNGDFEIPBERVET (ii)
TI-RPSEEFEIDEEEX (iii)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thrombin, inhibition, thrombus, thrombolysis, chimeric protein, plasminogen activating sequence, fibrinolysis, infarction, angina pectoris, deep vein thrombosis.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 393;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 100.0%; Score 510; DB 17; Similarity 100.0%; Pred. No. 4.7e-41; 88; Conservative 0; Mismatches 0;
              Wnendt S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 RRRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric protein M37 encoded by pSE9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A.
                Steffens GJ,
                                                                                                                            Disclosure; Fig 18; 59pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR99596 standard; Protein; 393
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                              thrombolytic agents
                                            WPI; 1996-240720/25
                Heinzel-Wieland R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      393 AA;
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AAR99596
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1 KTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                        Example 1 describes the prodn. of plasmids pSE1 and pSE9 contg. a DNA encoding a chimeric protein with fibrinolytic and thrombin-inhibiting properties.

SEI encodes the protein given in AAR99597 and pSE9 encodes the protein given in AAR95966.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 393;
                                                                                                                                                                                       useful as thrombus-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                    Chimeric protein contg. plasminogen activating sequence thrombin-inhibiting sequence - useful as thrombus-specithrombolytic agent with rapid action
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 510; DB 17; 100.0%; Pred. No. 4.7e-41;
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                                                     Steffens GJ,
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Job time : 14.8621 secs
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                                                                                                                                                                                                                                                          Example 1; Page 19-20; 37pp; German.
                                                   Janocha E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100.
nes 88; Conservative
(CHEF ) GRUENENTHAL GMBH
                                                                                                      WPI; 1996-269715/28
                                                   Heinzel-Wieland R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393 AA;
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us-09-880-503-1.rspt

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(without alignments)
2097.294 Million cell updates/sec
                                                                                              December 3, 2003, 14:34:23 ; Search time 10.8276 Seconds
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1 KTCYEGNGHFYRGKASTDTM.....QVGLKPLVQECMVHDCADGK 88
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
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Listing first 45 summaries
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1: sp archea:*
2: sp_bacteria:*
3: sp_tungl:*
4: sp_tungl:*
5: sp_invertebrate:*
5: sp_mammal:*
5: sp_mammal:*
5: sp_mhc:*
5: sp_phage:*
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Gapop 10.0 , Gapext 0.5
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Sequence:
                                                                                                                                                                                                                                Scoring table:
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                                                               OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                  Minimum 1
Maximum 1
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	O96se8 homo sanien	Osmilo orvetolacus	O8mbv7 orvetolagis	O9tva8 bos tamis	O8C612 mis misculu	O9xt70 orvotolagis	OSmkbl orverolagis	Capitaes cand oblide	O91vp2 ming mile	Osna20 homo sanien	O9bzwl homo sanien	OBSECT TOWN DEPT.	08k0d2 mis misciilii	014520 homo ganian	15 outles 2000	Q8vcs4 mus musculu
SUMMARIES	QI	Q96SE8	DBMILO	OSMHY 7	O9TVA8	Q8C6L2	09XT70	Q8MKB1	09BU99	091VP2	OBNG20	O9BZW1	588023	OBKOD2	014520	090675	Q8VCS4
		4,	9	v	<sub>o</sub>	11	9	9	4	11	4	4	9	11	4	13	11
	Query Match Length DB	154	433	433	157	231	214	564	516	559	90	395	562	517	560	202	653
οko	Query Match	97.1	81.4	81.4	77.6	75.9	61.4	46.1	44.3	42.9	42.8	42.2	41.2	41.1	37.9	37.5	36.9
	Score	495	415	415	396	387	313	235	226	219	218.5	215	210	209.5	193.5	191	188
	Result No.	Н	7	m	4	2	9	7	œ	6	10	11	12	13	14	15	16

RI Mang W., Xi X., Ruan C.;
RI "Overexpression of the amino-terminal fragment of human urokinase-type plasminogen activator in breast cancer cells results in decreased argument activator in breast cancer cells results in decreased two invasion, growth and angiogenesis.";
RI "Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
RI "Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.

RI "Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.

BR "InterPro; IPR006219; EGF like.

BR InterPro; IPR006219; IEGF.

BR "InterPro; IPR006219; Kringle.

BR RIMTS; PR000013; Kringle.

BR RART; SM00181; EGF; 1.

BR SMART; SM00181; EGF; 1.

BR SMART; SM00181; EGF; 1.

BR PROSITE; PS00022; EGF 1: 1.

BR PROSITE; PS00021; KRINGLE 1; 1.

035727 mus musculu	097507 sus scrofa	Q8axx3 xenopus lae	Q8izz5 homo sapien	Q8axy6 gallus gall	090y90 xenopus lae	046506 papio hamad		O18783 macropus eu	Q9uir7 homo sapien	Q8wmr1 canis famil	Q9r0w3 rattus norv	Q91691 xenopus lae	Q8n2j4 homo sapien	ошог	Q9btp9 homo sapien	Omor		Q8k0q8 mus musculu	Q8c3w2 mus musculu	Q8bsp6 mus musculu	Q9uir8 homo sapien	Q9uir6 homo sapien	Q9hlv4 homo sapien	O8k1s7 mus musculu	Q9brb6 homo sapien		Osbnp9 mus musculu	Q8bg10 mus musculu
11 035727	6 097507	13 Q8AXX3	o	13 Q8AXY6		6 046506	4 Q9UIR5	6 01,8783	4 Q9UIR7		11 Q9R0W3	13 Q91691	4 Q8N2J4	4 Q96GL8	4 Q9BTP9	4 QSNCW1	4 QBNCW0	11 Q8K0Q8	11 Q8C3W2	11 Q8BSP6	4 Q9UIR8	4 Q9UIR6	4 Q9H1V4	11 Q8K1S7	4 Q9BRB6	4 Q13208	11 Q8BNP9	11 Q8BG10
597	919	421	615	947	452	454	113	908	113	359	812	716	381	399	420	424	462	801	944	944	105	113	648	461	393	267	937	937
36.6	34.8	33.8	33.4	32.1	31.0	31.0	30.6	30.2	30.0	29.7	29.3	29.5	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	28.8	28.8	28.7	28.6	28.6	28.6	28.6
186.5	177.5	172.5	170.5	163.5	158	158	156	154	153	151.5	149.5	149	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148	147	147	146.5	146	146	146	146
17	18	19	20	21	22	23	24	25	56	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

## ALIGNMENTS

Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo. NCBI\_TaxID=9606;

Homo sapiens (Human)

01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
ULOKinase-type plasminogen activator amino-terminal fragment

154 AA.

PRT;

PRELIMINARY;

Q96SE8 RESULT 1 Q96SE8

[1]
SEQUENCE FROM N.A.
Fu J., Bai X., Ruan C.;
Fu J., Bai X., Ruan C.;
"Clonling and expression of the amino-terminal fragment of human urokinase-type plasminogen activator.";
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
[2]
SEQUENCE FROM N.A.

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01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 79.5
nes 70; Conservative
                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
Yano W., Watanabe M.;
                                                                                                                                                                                                               UROKINASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                    Q8MHY7
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                     RESULT 3
Q8MHY7
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                                                                                                                                                                                                        68 KTCYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDN 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70 KTCYHGDGHSYRGKANTDIMDRPCLAWNSANVLTKTYHAHRPDALQLGLGKHNYCRNPDH 129
                                                                                                                                                            1 KTCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
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                                                                                                                  Gaps
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PROSITE, PS00134; TRYPSIN_BIS; 1.
PROSITE; PS00135; TRYPSIN_SER, 1.
Glycoprotein; Hydrolase; Kinase; Kringle; Protease; Serine protease.
SEQUENCE 433 AA; 48375 MW; 65E64F36415549B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Increased expression of urokinase during atherosclerotic lesion development causes arterial constriction and lumen loss, and accelerates lesion growth.";

Proc. Natl. Acad. Sci. U.S.A. 99:10665-10670(2002).

-: SIMILARITY: BELONGS TO PREPIDASE FAMILY S1.

-: SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.

EMBL, A1122285; AAM83187.1;
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                                                                 Length 154;
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MEDLINE=22155945; PubMed=12149463;
Falkenberg M., Tom C., DeYoung M.B., Wen S., Linnemann R.
                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.4%; Score 415; DB 6; Length 43 larity 79.5%; Pred. No. 2e-41; Conservative 7; Mismatches 11; Indels
Glycoprotein, Kinase, Kringle.
SEQUENCE 154 AA; 17305 MW; A3CCF2FCFF505572 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                             Query Match 97.1%; Score 495; DB 4; L
Best Local Similarity 98.9%; Pred. No. 1.6e-51;
Matches 86; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                          433 AA
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InterPro; IPR006209; EGF like.
InterPro; IPR006209; EGF like.
InterPro; IPR00101; Kringle.
InterPro; IPR00101; Kringle.
Pfam; PF00081; Kringle; I.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; I.
SMART; SM00130; KR, I.
PROSITE; PS00021; TRYP_SPC; I.
PROSITE; PS00021; KRINGLE.
PROSITE; PS00021; KRINGLE.
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                                                                                                                                                                                                                                                                                                    128 RRRPWCYVQVGLKLLVQECMVHDCADG 154
                                                                                                                                                                                                                                                        61 RRRPWCYVQVGLKPLVQECMVHDCADG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Urokinase-type plasminogen activator
                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last seq
01-MAR-2003 (TrEMBLrel. 23, Last ann
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RY Yano W., Watanabe M.;

RY Yano W., Watanabe M.;

RY Yano W., Watanabe M.;

RY "Oryctolagus cuniculus urokinase-type plasminogen activator, mRNA, momplete cds.";

RY "Oryctolagus cuniculus urokinase-type plasminogen activator, mRNA, manited (JUL-2002) to the EMBL/GenBank/DDBJ databases.

CC -!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.

CC -!- SIMILARITY: CONTAINS 1 KRINGLE DOWAIN.

EMBL; AV029517; AAK4039-1; --

DR EMBL; AV029517; AAK4039-1; --

DR EMBL; AV029517; AAK4039-1; --

BR InterPro; IPR000001; Kringle.

DR InterPro; IPR000001; Kringle.

DR Ffam; PP00011; Kringle; 1.

DR Ffam; PP00011; Kringle; 1.

DR Ffam; PR00108; KRINGLE.

DR RNART; SM001020; Tryp SPC; 1.

DR RNART; SM001020; Tryp SPC; 1.

DR RNART; SM001020; Tryp SPC; 1.

DR RNART; SM001021; KRINGLE 1; 1.

DR RNART; SM001021; KRINGLE 1; 1.

DR RNOSITE; PS001021; KRINGLE 1; 1.

DR RNOSITE; PS001035; TRYPSIN DOM; 1.

DR RNOSITE; PS001035; TRYPSIN DOM; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.

DR RNOSITE; PS001035; TRYPSIN SER; 1.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Urokinase plasminogen activator (Fragment).
Bos taurus (Bovine).
Bustaryota, Metazoa; Chordata, Cramiata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                        Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11; Indels
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Sugiki M., Yoshida E., Anai K., Maruyama M.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
                                                    Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2e-41;
433 AA
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                                                                                                                                                   Urokinase-type plasminogen activator
PRT;
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SEQUENCE
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Q9XT70
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STRAIN=CS7BL/6J; TISSUE=Ovary;
MEDLINE=22354683; PubMed=12466851;
The PANTOW Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I & II Team;
the Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length ONNA.";
Nature 420:563-573(2002).
EMBL; AK054349; BAC35743.1; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                           A BAICGEZAK D., Querengueserr L., Dixon W.T., Baracos V.E.;

"Coordinate expression of matrix-degrading proteinases and their activators and inhibitors in bovine skeletal muscle.";

J. Anim. Sci. 79:94-107(201).

-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.

REMBL; AF144761; AAD30301.1;

R HSSP; P00749; IURK.

R InterPro; IPR006209; EGF like.

R InterPro; IPR006209; Kringle.

R Pfam; PR0001; Kringle.

R Pfam; PR0001; Kringle.

R Pfam; SR00018; Kringle.

R Probom; P0000395; Kringle.

R Probom; P0000395; Kringle.

R PROBOM: P0000395; Kringle.

R PROBOM: P0000395; Kringle.

R PROBOM: P0000395; Kringle.

R PROBOM: P0000395; Kringle.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 157;
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157 AA; 17858 MW; A768D6C72C1FBFB7 CRC64;
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(TrEMBLrel. 23, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.6%; Score 396; DB 6; 76.1%; Pred. No. 1.2e-39; iive 8; Mismatches 13;
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                                                                                                                            TISSUE=Skeletal muscle,
MEDLINE=21071388; PubMed=11204721
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PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 76.18
Matches 67; Conservative
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01-MAR-2003 (
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20 MGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQEC
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PROSITE; PS60134; TRYPSIN HIS; 1.
Glycoprotein; Hydrolase; Kinase; Kringle; Protease; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Urokinase-type plasminogen activator (Fragment).
Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2003 (TrEMBLrel. 23, Last annotation update)
11-5sue-type plasminogen activator.
15-5sue-type plasminogen activator.
07-yctcolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Lagomorpha; Leporidae; Oryctolagus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Lung;
Yin J., Idell S.;
Yin J., Idell S.;
"Partial mRNA of rabbit uPA.";
"Bartial mRNA of rabbit uPA.";
"Simitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; AF097647; AAD39351.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61.4%; Score 313; DB 6; Length 21
78.3%; Pred. No. 1.6e-29;
Live 5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
Sugiki M., Yoshida E., Anai K., Maruyama M.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
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129 QKRPWCYVQIGLRQFVQECMVHDCSLSK 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR0010001; Kringle;
Pfam; PF000154; Kringle; I.
Pfam; PF00089; trypsin; I.
PRINTS; PR00725; CHYMOTRYPSIN.
ProDom; PD000395; Kringle; I.
SWART; SM00130; KR; I.
SWART; SM00130; KR; I.
PROSITE; PS00021; KRINGLE; I.
PROSITE; PS00021; KRINGLE; I.
                                                                                                                                                                                                                                                                                                                 PRT;
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                                                                                                                                                                                                                                                                                                            PRELIMINARY;
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TISSUE=Breast tumor;
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MRA-2003 (TrEMBLrel. 23, Last annotation update)
Similar to plasminogen activator, tissue.
Memo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
CC -i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.

CC -i- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.

EMBL; AY029518; AAK40240.1; -

InterPro; IPR006209; EGF like.

InterPro; IPR006209; EGF like.

InterPro; IPR0001314; Fibractal.

R InterPro; IPR0001015 Kringle.

R InterPro; IPR0001015 Kringle.

R InterPro; IPR000154; Ser_Drotease_Try.

R Fam; Pr000159; EGF, li.

PR PRO00159; EGF, li.

PR PRO00159; EGF, li.

PR PRO00159; EGF, li.

PR PROFOSS; ENTORIS.

PROFOSS; ENTORIS.

PROFOSS; ENTORIS.

PROFOSS; ENTORIS.

PROFOSS; ENTORIS.

PROSITE; PRO0025; KRINGLE.

PROSITE; PRO0025; KRINGLE.

PROSITE; PRO00215; PRESCTIN 1; 1.

PROSITE; PRO0021; PYP, EFF; 1.

PROSITE; PRO0021; PYP, EFF; 1.

PROSITE; PRO0021; FYP, EFF; 1.

PROSITE; PRO0021; FYP, EFF; 1.

PROSITE; PRO0021; FYP, EFF; 1.

PROSITE; PRO0021; FYP, EFF; 1.

PROSITE; PRO0031; TYP, EFF; 1.

PROSITE; PRO00314; TYP, EFF; 1.

PROSITE; PRO00314; TYP, EFF; 1.

PROSITE; PRO00315; TRYPEIN'EE; 1.

PROSITE; PRO0135; TRYPEIN'EE; 1.

PROSITE; PRO0135; TRYPEIN'EE; 1.

PROSITE; PRO0135; TRYPEIN'EE; 1.

PROSITE; PRO0135; TRYPEIN'EE; 1.
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Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
L. SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
C. -1- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
R. HSSP; POO755; AAH02795.1; -.
R. HSSP; POO755; AAH02795.1; -.
R. InterPro; IPR006209; EGF like.
R. InterPro; IPR006209; EGF like.
R. InterPro; IPR006210; IEGF.
R. InterPro; IPR006210; Kringle.
R. InterPro; IPR006210; Kringle.
R. InterPro; IPR006210; Kringle.
R. InterPro; IPR006210; Kringle.
R. InterPro; IPR006210; Kringle.
R. Pfam; PF00008; EGF; 1.
R. Pfam; PF00008; EGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match 46.1%; Score 235; DB 6; Length 564; Local Similarity 50.6%; Pred. No. 1e-19; nes 42; Conservative 10; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   564 AA; 62726 MW; 459D8BAC6D4A937C CRC64;
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TISSUE=Skin;
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SEQUENCE 564 A
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                         R PROBLES, SMOOLSE, ALTINGSE, SMART; SMOOLSE, ALTINGSE, SMART; SMOOLSE, EGF 1.

SMART; SMOOLSE, EGF 1.

R PROSITE; PSOOLSE, EGF 1.

R PROSITE; PSOOLSE, EGF 1.

R PROSITE; PSOOLSE, EGF 1.

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01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR006209; EGF like.
InterPro; IPR006209; EGF like.
InterPro; IPR006210; IEGF.
InterPro; IPR006210; IEGF.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00008; EGF; I.
Pfam; PF00008; EGF; I.
Pfam; PF00008; EGF; I.
Pfam; PF00089; Int; I.
Pfam; PF00089; trypsin; I.
PRINTS; PR00722; CHYMOTRYPSIN.
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Pfam, PF00089, trypsin, 1.
PRINTS, PR00722, CHYMOTRYPSIN.
PRINTS, PR00018, KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Probom; PD000395; Kringle; 2.
SMART; SM0011; BGF; 1.
SMART; SM0018; FN1; 1.
SMART; SM00130; KR; 2.
SMART; SM00020; Tryp. SPC; 1.
PROSITE; PS000021; EGF 1; 1.
PROSITE; PS01186; EGF 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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091042
1D 091042
DT 01-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O1-DD O
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBL_TaxID=9606,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
T-plasminogen activator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   562 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     108 KPWCHVLKNRRLTWEYCDVPSCS 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 RPWCYVQVGLKPLVQECMVHDCA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
TISSUE=Enamel organ;
                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sus scrofa
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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                                                                                                                                                                           3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                           2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 CYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Gaps
                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
10.1 TaxID=9606;
PROSITE; PS01253; FIBRONECTIM 1; 1.
PROSITE; PS00021; KRINGLE 1; 2.
PROSITE; PS50070; KRINGLE 2; 2.
PROSITE; PS50010; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
EGF-like domain; Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
Serine Drotease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42.8%; Score 218.5; DB 4; Length 90;
49.4%; Pred. No. 1.3e-18;
tive 5; Mismatches 36; Indels
                                                                                                               / Match 42.9%; Score 219; DB 11; Length 559; Local Similarity 46.0%; Pred. No. 8.5e-18; nes 40; Conservative 11; Mismatches 36; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein, Kringle. _____SEQUENCE 90 AA; 9804 MW; A33887F9FDF4C7B1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MR-2003 (TrEMBLrel. 23, Last annotation update)
Neonatal thrombolytic agent alpha-form (Fragment).
                                                                                                                                                                                                                                                                                                           01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
11-OCT-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen/activator Kringle.
                                                                                                                                                                                                                               183 LKPWCYVFKAGKYTTEFCSTPACPKGK 209
                                                                                                                                                                                                           62 RRPWCYVQVGLKPLVQECMVHDCADGK 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63 RPWCYVQVGLKPLVQECMVHDCA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68 KPWCYT-TNPRKLYDYCDVPQCA 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                     Query Match
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                                                                                                                                                                                                                                                                                       OBNG20
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48 CYPGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDA 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 CYBGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
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Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R PRINTS; PRO0722; CHMOTRYPSIN.
R PRINTS; PRO018; KRINGIE.
R PRO018; KRINGIE.
R SMART; SM00185; KRINGIE.
R SMART; SM00100; KR; 1.
R SMART; SM00110; KR; 1.
R PROSITE; PS0020; TryP_SPC; 1.
R PROSITE; PS0070; KRINGIE 1; 1.
R PROSITE; PS00134; TRYPSIN DOM; 1.
R PROSITE; PS0134; TRYPSIN DOM; 1.
R PROSITE; PS0134; TRYPSIN DOM; 1.
R PROSITE; PS0134; TRYPSIN SER; 1.
R PROSITE; PS0135; TRYPSIN SER; 1.
R PROSITE; PS0135; TRYPSIN SER; 1.
R PROSITE; PS0135; TRYPSIN SER; 1.
NON_TER 395 395.
A Dou D.;

"A brain-type plasminogen activator.";

"A brain-type plasminogen activator.";

"A brain-type plasminogen activator.";

"Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.

-:- SIMILARITY: BELONGS TO PEFTIDASE FAMILY SI.

-:- SIMILARITY: CONTAINS I KRINGLE DOWAIN.

R EMBL; APS-60825; AAK11956.1; -. R

R HSSP; P00750; 1PK2.

R InterPro; IPR001314; Chymotrypsin.

R InterPro; IPR000083; Fibrnctnl.

R InterPro; IPR000083; Fibrnctnl.

R InterPro; IPR001254; Ser_protease_Try.

R Pfam; PF00059; Kringle; I.

R Pfam; PF00069; trypsin: Aringle; I.

R Pfam; PF00069; trypsin: Aringle; I.

R Pfam; PF00069; trypsin: Aringle; I.

R Pfam; PF00069; trypsin: Aringle; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match 42.2%; Score 215; DB 4; Length 395; Local Similarity 47.0%; Pred. No. 1.8e-17; es 39; Conservative 8; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ding Y., Xue J., Bartlett J.D.;
"T-plasminogen activator in tooth tissues.";
submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 2 KRINGLE DOMAINS.
EMBL; AF364605; AAM00297.1; -.
HSSP; P00761; IAN1.
InterPro; IPR006209; EGF_like.
InterPro; IPR00083; Fibrnctn1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  395 AA; 44323 MW; 3FBD4A2F0B7C11C8 CRC64;
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Gaps

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3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Purification and characterization of a novel hyaluronan-binding protein (PHBP) from human plasma: it has three EGF, a kringle and a serine protease domain, similar to hepatocyte growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=96425001; PubMed=8827452;
Choi-Miura N.H., Tobe T., Sumiya J., Nakano Y., Sano Y., Mazda T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
PROSITE; PS01186; EGF_2; 2.
PROSITE; PS00021; KRINGLE_1; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00135; TRYPSIN SR; 1.
PROSITE; PS00135; TRYPSIN SR; 1.
Hypothetical protein; EGF_1ike domain; Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
SEQUENCE 517 AA; 57326 MW; 3855A42035A5EA59 CRC64;
                                                                                                                                                                                                            1;
                                                                                                                                                                              DB 11; Length 517;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Colon, and Kidney;
A Strausberg N.A.
Strausberg N.A.
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
C -! SIMILARITY: BELONGS TO PREPIDASE FAMILY S1.
C -! SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
R EMBL; S83182; AAB468956.1; -.
R EMBL; BC3182; AAB46899.1; -.
R EMBL; BC31812; AAH31412.1; -.
R HSSP; POO763; LDO7
                                                                                                                                                                                                                                                                                                                                                                                                                                                 014520; 000663;
01-NOV-1996 (TrEWBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2003 (TrEMBLrel. 23, Last annotation update)
HGF activator like protein (Hyaluronan binding protein 2).
                                                                                                                                                                          Query Match
41.1%; Score 209.5; DB 11; Length
Best Local Similarity 45.8%; Pred. No. 1.1e-16;
Matches 38; Conservative 13; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kitamura N.;
Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                        560 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genew; HGNC:4798; HABP2.
InterPro; IPR006209; EGP like.
InterPro; IPR006209; EGP like.
InterPro; IPR000001; Kringle.
InterPro; IPR00001; Kringle.
Fam; PP00008; EGF; 3.
Fam; PP00008; EGF; 3.
Fam; PP00008; LYPSin; 1.
Pfam; PR0001; Kringle; 1.
Pfam; PR0001; Kringle; 1.
Pran; PR0012; CHYMOTRYPSIN.
PRINTS; PR0072; CHYMOTRYPSIN.
PRINTS; PR0072; CHYMOTRYPSIN.
PROSITE; PR0001395; KRINGLE.
PROSITE; PR00122; EGF_1; 3.
                                                                                                                                                                                                                                                                                                                                       211 KPWCFVKVNSEKVKWEYCDVTVC 233
                                                                                                                                                                                                                                                                                                                 63 RPWCYVQVGLKPLVQE-CMVHDC 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Biochem. 119:1157-1165(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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Q14520
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                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                           R Pfam; PF00005; Enf; 1.

R Pfam; PF00005; Enf; 1.

R Pfam; PF00009; Enf; 1.

R Pfam; PF00009; Lnypsin; 1.

R Probom; PD0000395; Kringle; 2.

R MART; SM00181; EGF; 1.

R SMART; SM001205; RX; 2.

R SMART; SM00120; TXP, 2.

R PROSTTE; PS01125; F11; 1.

R PROSTTE; PS01125; F12; 1.

R PROSTTE; PS01125; KRINGLE 1; 2.

R PROSTTE; PS00121; KRINGLE 1; 2.

R PROSTTE; PS00134; TRYPSIN DE; 1.

R PROSTTE; PS00134; TRYPSIN HIS; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.

R PROSTTE; PS00135; TRYPSIN SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Grausberg R.;
Strausberg R.;
Submitted (UUN-2002) to the EMBL/GenBank/DDBJ databases.
C:-SIMILARITY: BELOOMS TO PEPTIDASE FAMILY S1.
C:-SIMILARITY: BELOOMS TO PEPTIDASE FAMILY S1.
C:-SIMILARITY: BELOOMS TO PEPTIDASE FAMILY S1.
DR INTERPRO; DRN00134; CLYMOLYTYSIN.
RICHEPPO; IPR00134; CLYMOLYTYSIN.
RICHEPPO; IPR00134; EGF_Ca.
DR INTERPO; IPR006210; EGF_like.
BRICHEPPO; IPR006210; EGF_like.
DR INTERPO; IPR001254; Ser_protease_Try.
DR PEAM; PF00108; Kringle.
DR PÉAM; PF00108; Kringle; 1.
DR PEAM; PR00125; Kringle; 1.
DR PEAM; PR00135; Kringle; 1.
DR PRINTS; PR00135; Kringle; 1.
DR PRINTS; PR00136; Kringle; 1.
DR PRINTS; PR00136; Kringle; 1.
DR RINTS; PR00136; Kringle; 1.
DR PRNTS; SM00136; KRINGLE.
BRART; SM00136; KR; 1.
DR SMART; SM00130; KR; 1.
DR SMART; SM0130; KR; 1.
DR PROSITE; PS00022; EGF_1; 3.
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
41.2%; Score 210; DB 6; Length 562;
Best Local Similarity 43.7%; Pred. No. 1e-16;
Matches 38; Conservative 9; Mismatches 40; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OT-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          517 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186 SKPWCYIFKAEKYSPDFCSTPACTKEK 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 RRPWCYVQVGLKPLVQECMVHDCADGK 88
InterPro; IPR000001; Kringle.
InterPro; IPR0001254; Ser_protease_Try.
Pfam; PF00008; EGF; 1.
Pfam; PF00039; fn1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8K0D2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQIYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAINS—White Legionn;
STRAINS—White Legionn;
Johnson A.L., Bridgham J.T., Anthony R.V.;
Johnson A.L., Bridgham J.T., Anthony R.V.;
Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains—Strains
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                           Match
Local Similarity 41.7%; Pred. No. 9.8e-15;
Les 35; Conservative 15; Mismatches 33; Indels 1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Gaps
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Best Local Similarity 43.9%; Pred. No. 6.4e-15;
Matches 36; Conservative 7; Mismatches 39; Indels
PROSITE; PS01186; EGF_2; 2.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
PROSITE; PS50014; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
BGF-11ke domain; Glycoprofein; Hydrolase; Kringle; Protease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              202 202
202 AA; 23148 MW; 049DB42941DB3AFC CRC64;
                                                                                                                                                                                                                                                                                                                                            560 AA; 62671 MW; 5C1907230784ACD4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Tissue-type plasminogen activator (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          202 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254 KPWCFIKVTNDKVKWEYCDVSACS 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 RPWCYVQVGLKPLVQE-CMVHDCA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPA.
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEROPS; S01.232; -.
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                                                                                                                                                                                                                                                                                                           Serine protease.
SEQUENCE 560 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON TER
NON TER
SEQUENCE
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Q90675
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36.9%; Score 188; DB 11; Length 653; 53.0%; Pred. No. 5.3e-14; tive 6; Mismatches 25; Indels (
                                                                                                                                                                        Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL; BCO19375; AAH19376.1; -.
HSSP; P00761; 1AN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FE18D90174ED6FDD CRC64;
                                                                         01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical 70.6 kDa protein.
Mus musculus (Mouse).
                                                          PRT; 653 AA.
         101 OPWCHVWKDRQLTWEYCDVPQC 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kringle; Protease; Serine protease.
SEQUENCE 653 AA; 70553 MW; FE18
63 RPWCYVOVGLKPLVQECMVHDC 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Similarity 53.03
Matches 35; Conservative
                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343 RPWCYV 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 RPWCYV 68
                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                         NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                          Q8VCS4
                                           RESULT 16
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InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000742; BGF 2.
InterPro; IPR006209; BGF like.
InterPro; IPR000083; Fibrnotni.
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Best Local Similarity 44.6%
                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                   NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS; S01.211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  273
                                      097507
RESULT 18
                  097507
                                                             NAME OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  216 TCYEGRGLSYRGQAGTTQSGAPCQRW----TVEATYRNWTEKQALSWGLGHHAFCRNPDN 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 TCYEGNGHFYRGKASTDIMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                        Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
[1] TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R SWART; SW001935; ALIMATE; 1.

R SWART; SW001935; ALIMATE; 1.

R SWART; SW00059; FN1; 1.

SWART; SW00059; FN2; 1.

R SWART; SW00020; Tryp, SPC; 1.

R PROSITE; PS00120; EGF_1; 2.

R PROSITE; PS01253; FIBRONECTIN 1; 1.

R PROSITE; PS00021; KRINGLE 1; 1.

R PROSITE; PS00013; FIBRONECTIN 2; 1.

R PROSITE; PS00013; FIBRONECTIN 1; 1.

R PROSITE; PS00013; FIBRONECTIN 1; 1.

R PROSITE; PS00013; FIBRONECTIN 1; 1.

R PROSITE; PS00013; FIRVEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.

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R PROSITE; PS00135; TRYPEIN HIS; 1.

R PROSITE; PS00135; TRYPEIN HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5;
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                                                                                                                                                                                                                                                                                                                                                        Schloesser M., Schwager S., Engel W.;
Schloesser M., Schwager S., Engel W.;
Submitted (JUL-1996) to the EMBL/Genbank/DDBJ databases.

-:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.

-:- SIMILARITY: CONTAINS I KRINGLE DOWAIN.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMEL; X99571; CAA67891.1; -.

REMECPPO; IPRO0131; FI2.

RICEPPO; IPRO00639; FISTANCH.

RICEPPO; IPRO00639; FISTANCH.

REMECPPO; IPRO0061; Kringle.

REMEM; PF000049; FI1; 1.

REMEM; PF000049; Kringle; 1.

REMEM; PRO00651; Kringle; 1.

REMINTS; PRO0012; CHYMOTRYPEII.

REMINTS; PRO0121; CHYMOTRYPEII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36.6%; Score 186.5; DB 11; Length 44.0%; Pred. No. 7.2e-14; Live 8; Mismatches 34; Indels
                                                                                                                           Last sequence update)
Last annotation update)
                                                           597 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DTRPWCFVWSGDRLSWDYCGLEQC 295
                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 RRRPWCYVQVGLKPLVQECMVHDC 84
                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0018; KRINGLE.
ProDom; PD000995; FN Type II; 1.
ProDom; PD000395; Kringle; 1.
                                                                                               (TrEMBLrel. 05, C (TrEMBLrel. 05, I (TrEMBLrel. 23, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 37; Conserva
                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                               rissum=Liver;
                                                                                               01-JAN-1998 (
01-JAN-1998 (
01-MAR-2003 (
Factor XII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                             035727
                  RESULT 17
035727
                                                             g
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CYSDRGLSYRGMAQTILSGAPCQPWAS----EATYWNMTAEQALNWGLGDHAFCRNPDND 272
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; Gaps
                                                                                                                                                                                   Sus scrofa (Pig).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R SWART; SM00181 EGF; 1.

R SWART; SM00181 EGF; 1.

R SWART; SM00181 FN1; 1.

SMART; SM00185 FN1; 1.

SMART; SM00185 FN2; 1.

R SWART; SM00185 FN2; 1.

R PROSITE; PS00122; EGF_1; 2.

R PROSITE; PS00123; FIBRONECTIN_1; 1.

R PROSITE; PS00123; FIBRONECTIN_2; 1.

R PROSITE; PS00124; FIBRONECTIN_2; 1.

R PROSITE; PS00124; FIBRONECTIN_2; 1.

R PROSITE; PS00124; TRYPSIN LS; 1.

R PROSITE; PS00134; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN HIS; 1.

R PROSITE; PS00135; TRYPSIN ESR; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R PROSITE; PS00135; TRYPSIN SER; 1.

R SEQUENCE 616 AA; 68012 MW; 4C5FE3D71EBBDIA9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34.8%; Score 177.5; DB 6; Length 616; 44.6%; Pred. No. 9e-13; Live 6; Mismatches 35; Indels 5.
                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Liver;
Takahashi T., Kihara T.;
"Porcine liver factor XII.";
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- SIMILARITY: CONTAINS 1 KRINGLE DOWAIN.
EMBL; AB022425; BAA37148.1; -.
                                                        01-WAY-1999 (TrEMBLrel. 10, Created)
01-WAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
616 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IRR000562; FN_TYPE_II.
InterPro; IPR00056210; IEGF.
InterPro; IPR0005010; IEGF.
InterPro; IPR0000011; Kringle.
InterPro; IPR00000154; Ser_protease_Try.
Pfam; PF000039; fn1; 1.
Pfam; PF000039; fn1; 1.
Pfam; PF000051; Kringle; 1.
PRINTS; PR00051; Kringle; 1.
PRINTS; PR00013; FNTYPEII.
PRINTS; PR00013; FNTYPEII.
PRINTS; PR00013; FNTYPEII.
PRODOM; PD000995; FN TYPE II: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||||:| | : | : | TRPWCFVWRGDQLSWQYCRLARC 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 RRPWCYVQVGLKPLVQECMVHDC 84
PRT;
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RESULT 19

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01-MAR-2003 (TrEMBLrel. 23, Created)
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Pfam, PF00431, Kringle; 1.
Pfam, PF01822, MSC, 1.
PRINTS, PR00018, KRINGLE.
PRODOM; PD000435; KRINGLE.
SMART; SM0042; CUB; 1.
SMART; SM00130; KR; 1.
                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 38.8%
Watches 38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR002889; WSC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xenopodinae; Xenopus.
                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                           Receptor; Kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI TaxID=8355;
                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 TCYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTY-HAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                                                                                                                        3 CYEGNGHFYRGKAS-TDIMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNR 61
                                                                                                                                                                                                                                                                                                                                                                               29 CFTVNGRDYRGTVSQAGPEGTPCLYWNQTT--QHLYNAQSDPDGELGLGNHNYCRNPDAD 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5; Gaps
                                                                                                                                                                                                                                                                                                                               3; Gaps
                                                                                                                                                                                           MEDLINE-22308873; PubMed-12421700;
Davidson G., Mao B., Del Barco Barrantes I., Niehrs C.;
"Kremen proteins interact with Dickkopf1 to regulate anteroposterior
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human),
Skaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                     Xenopus laevis (African clawed frog).
Sukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FACTORY, NAT., Nakatani K., Kasai Y., Abe Y., Nobori T., Wada H., Nishioka J., Nakatani K., Kasai Y., Abe Y., Nobori T., "Molecular chracterization of coaggulation factor XII-Mie.", Submitted (NOV-2002) to the EMBL/GenBank/DDBJ databases. EMBL, AB095845, BAC23095.1; "030508870AOC7EDB CRC64;
                                                                                                                                                                                                                                                                                                 Query Match
33.8%; Score 172.5; DB 13; Length 421;
Best Local Similarity 50.7%; Pred. No. 2.4e-12;
Matches 34; Conservative 4; Mismatches 26; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.4%; Score 170.5; DB 4; Length 615; 48.5%; Pred. No. 6.2e-12; ive 6; Mismatches 24; Indels 5
                                                                                                                                                                                                                                      CNS patterning.";
Development 129:5587-5596(2002).
Development 129:5587-5596(1): -
SEQUENCE 421 AA; 46274 MW; 74D04DB1682CD15F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-WAR-2003 (TrEMBLrel. 23, Created)
01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
                                    01-MAR-2003 (TrEMBLrel. 23, Created) 01-MAR-2003 (TrEMBLrel. 23, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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               421 AA
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             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coagulation factor XII-Mie.
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                PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                            62 RRPWCYV 68
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Best Local Similarity
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                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                           NCBI_TaxID=8355;
                                                                                 Kremen2.
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                               QBAXX3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 KICYEGNGHFYRGKASIDIMGRPCLPWNSATVLQQTYHAHR-----SDALQLGLGK 51
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=20538710; PubMed=11083926;
ID F.C., Glass D.G., Gles D.R., Cheung J., Lai K.O., Fu A.K.,
Yancopoulos G.D., ID Y.;
"Cloning and characterization of muscle-specific kinase in chicken.";
Mol. Cell. Neurosci. 16:661-673(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.1%; Score 163.5; DB 13; Length 947;
38.8%; Pred. No. 6.9e-11;
tive 6; Mismatches 27; Indels 27; Gaps
                                                                                                                                  Gallus gallus (Chicken).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Archosauria, Aves, Neognathae, Galliformes, Phasianidae, Phasianinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-21167372; PubMed=11267660; MEDLINE-21167372; PubMed=11267660; Makamura T., Aoki S., Kitajima K., Funakoshi H., Takahashi T., Matsumura T.; Aoki S., Kitajima K., Funakoshi H., Takahashi T., "Molecular cloning and characterization of Kremen, a novel kringle-containing transmembrane procesin."

"Molecular cloning and characterization of Kremen, a novel kringle-containing transmembrane procesin."

"Molecular cloning and characterization of Kremen, a novel kringle-containing transmembrane procesin."

"Solician School Ransmembrane Procesin."

"SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.

"SIMILARITY: CONTAINS 1 CUB DOMAIN.

"BMBL; ABG70851; BAB64294.1; "
InterPro; IPR0000859; CUB domain.

InterPro; IPR000001; Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gies D., Glass D.J., Yancopoulos G.D.,
Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AX143173, AAN05008.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      947 AA; 105588 MW; E6C3FCC5796CC8BE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        511 ENYCRNPGGENERPWCYTK---DPSVTWEYCSVSPCGD 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Muscle-specific receptor tyrosine kinase MuSK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52 HNYCRNP-DNRRRPWCYVQVGLKPLV--QECMVHDCAD 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        452 AA.
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Lawn R.M., Schwartz K., Patthy L.; "Convergent evolution of apolipoprotein(a) in primates and hedgehog."; Proc. Natl. Acad. Sci. U.S.A. 94:11992-11997(1997).
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                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=21181705; PubMed=11285247;
MEDLINE=21181705; PubMed=11285247;

Ggorelkova M., Kraft H.G., Ehnholm C., Utermann G.;

"Single nucleotide polymorphisms in exons of the apo(a) kringles IV types 6 to 10 domain affect Lp(a) plasma concentrations and have different patterns in Africans and Caucasians.";

Hum. Mol. Genet. 10:815-824 (2001).

-! SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Metatheria, Diprotodontia, Macropodidae, Macropus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch 30.6%; Score 156; DB 4; Length 113; 1 Similarity 37.8%; Pred. No. 5.3e-11; 34; Conservative 12; Mismatches 32; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113
12685 MW; F3D65681D9B5253A CRC64;
                                                                                                                                                                                                      Last sequence update)
Last annotation update)
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  157 DTGPWCFT---MDPSVRWEYCNLTRCSD 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64 DADIGPWCFT---MDPSIRWEYCNLTRCSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 DNRRRPWCYVQVGLKPLV--QECMVHDCAD
                                                                                                                                                                          Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein, Kringle, Lipoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF158663; AAF03680.1; -.
EMBL; AF158662; AAF03680.1; JOINED.
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MEDLINE=98004511; PubMed=9342350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Macropus eugenii (Tammar wallaby)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00130; KR; 1.
PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP, P00747; 1PMK.
InterPro; IPR000001; Kringle.
Pfam, PF00001; Kringle; 1.
PRINTS; PR00018; KRINGLE.
ProDom; PD000185; KRINGLE.
                                                                                                                                                                                                    (TrEMBLrel. 13, (TrEMBLrel. 23,
                                                                                                                                                                                                                                                  Apolipoprotein(a) (Fragment)
                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998 (TrEMBLrel. 05,
                                                                                                                         PRELIMINARY;
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                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 AA;
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9315;
                                                                                                                                                                                                 01-MAY-2000
01-MAR-2003
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018783
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                                                                                                                                                                                                                      3 CYEGNGHFYRGKASIDIM--GRPCLPWNSAIVLQQTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                                                                                                     3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQ--QTYHAHRSDALQLGLGKHNYCRNPDN 60
                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cox L.A., Jett C., Hixson J.E.;
"Molecular Basis of the Apolipoprotein (a) Null Phenotype: A Splice
Site Mutation is Associated with Deletion of a Single Exon in a Null
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Papio hamadryas (Hamadryas baboon).
Vakaryota: Metazoos, Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Papio.
                                                                                                                                                                          4,
                                                                                                                 31.0%; Score 158; DB 13; Length 452; 44.1%; Pred. No. 1.4e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.0%; Score 158; DB 6; Length 454; 39.8%; Pred. No. 1.4e-10; ive 10; Mismatches 31; Indels
                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50070; KRINGLE_2; 2.
PROSITE; PS50240; TRYPSIN_TOW; 1.
PROSITE; PS00135; TRYPSIN_ER; 1.
Glycoprotein; Hydrolase; Kringle; Lipoprotein; Protease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Allele.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- SIMILARITY: COUTAINS 2 KRINGLE DOMAINS.
EMBL; AP029691; AAB97886.1; -.
HSSP; P00747; 2PK4.
                                                                   50188 MW; ED24BCD1AF4564E2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454 AA; 50041 MW; 974E30744C187B2F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                  9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 RRRPWCYVQVGLKPLV--QECMVHDCAD 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR001254; Ser protease_Try.
Pfam; PF00051; Kringle; 2.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
ProDom; PD000395; Kringle; 2.
SMART; SM00130; KR; 2.
SMART; SM00020; Tryp SPc; 1.
PROSITE; PS00021; KRINGLE 1; 2.
PROSITE; PS50071; KRINGLE 1; 1. PROSITE; PS50070; KRINGLE 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-1998 (TrEMBLrel. 06, 01-JUN-1998 (TrEMBLrel. 06,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-1998 (TrEMBLrel. 06, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apolipoprotein a (Fragment)
BABAPOA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>-</u>
                                                                                                                                              Best Local Similarity 44.1
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 39.8
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                              Glycoprotein, Kringle.
                                                                                                                                                                                                                                                                                                                   61 RRRPWCYV 68
                                                                                                                                                                                                                                                                                                                                                                 88 DVSPWCYI 95
                                                                        452 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEROPS; S01.999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Serine protease
                                                                        SEQUENCE
                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 23
046506
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3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRR
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"Angiostatin is Detectable in the Urine of Dogs with Spontaneous Bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 CYEGNGHFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDAL-----QLGLGKHNYCRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.7%; Score 151.5; DB 6; Length 359;
44.3%; Pred. No. 6.6e-10;
Live 5; Mismatches 21; Indels 13; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen (Fragment).
Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                                                                     .
8
                                                                                                                                Query Match 30.0%; Score 153; DB 4; Length 113; Best Local Similarity 39.3%; Pred. No. 1.2e-10; Matches 33; Conservative 8; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cancer.";
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
L-bmitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
L-similarity: CONTAINS 4 KRINGLE DOMAINS.
R-BMBL; AV069985, AAL58519.1;
InterPro; IPR000001; Kringle.
InterPro; IPR000001; Kringle.
R Pfam; PR00051; Kringle; 4.
R PRINTS; PR00051; KRINGLE.
R PRINTS; PR000395; KRINGLE.
R PRODOM; PR000395; KRINGLE.
R PROSTIE; P800021; KRINGLE.
R PROSTIE; P800021; KRINGLE.
R PROSTIE; P800021; KRINGLE.
R PROSTIE; P800021; KRINGLE.
R PROSTIE; P800021; KRINGLE.
R PROSTIE; P800021; KRINGLE.
      1 11
113 113 113 MW, 4F80ADF8708548CB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       359 359 359 376 776D35F4ABOBDD9E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Plasminogen protein precursor (BC 3.4.21.7).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                359 AA
                                                                                                                                                                                                                                                                                                                                                                                       63 RPWCYVQVGLKPLV--QECMVHDC 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                  68 RPWCYT---MDPSVRWEYCNLTRC 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 44.3 (es 31, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glycoprotein, Kringle.

NON_TER 1 1

NON_TER 359 359

SEQUENCE 359 AA; 41:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2002
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      NON_TER
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SEQUENCE
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Matches
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Q9R0W3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 10.2%; Score 154; DB 6; Length 806; Local Similarity 35.5%; Pred. No. 8e-10; les 33; Conservative 11; Mismatches 25; Indels 24; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=21181705; PubMed=11285247;
Ogorelkova M., Kraft H.G., Ehnholm C., Utermann G.;
"Single nuclectide polymorphisms in exons of the apo(a) kringles IV Single nuclectide polymorphisms in exons of the apo(a) and have different patterns in Africans and Caucasians.";
Hum. Mol. Genet. 10:815-824 (2001).
-i- SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
EMBL, AF158659; AAF03679.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_ERR; 1.
Glycoprotein; Hydrolase; Kringle; Protease; Serine protease.
SEQUENCE 806 AA; 90981 MW; 95PAA86DC20064D5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Apolipoprotein(a) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420 CRNPDGDKSPWCYT -- - MDPTVRWEFCNLEKCS 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRNPDNRRRPWCYVQVGLKPLV--QECMVHDCA 85
                                                                                  InterPro; IPR0001314; Chymotrypsin.
InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
InterPro; IPR00366; Pan app.
InterPro; IPR00366; Prothrombin.
InterPro; IPR00154; Ser_protease_Try.
Pfam; PP00051; kringle; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00021; KRINGLE 1; 1.
PROSITE; PS50070; KRINGLE 2; 1.
Glycoprotein; Kringle; Lipoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                         Pram, Pronoss, Lypsin, 1.
PRINTS, PR00722, CHYMOTRYPEIN.
PRINTS, PR00128, CHYMOTE.
PRINTS, PR01505, PROTHROMSIN.
ProDom, PD0003895, Kringle; 5.
SMART, SM004130, KR; 4.
SMART, SM004073; PAN AP; 1.
PROSITE; PS00021; KRINGLE 1; 5.
PROSITE; PS00070; KRINGLE 1; 5.
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InterPro; IPR00001; Kringle.
Pfam; PP00051; kringle; 1.
PRINTS; PR0018; KRINGLE.
ProDom; PD000395; Kringle; 1.
SMART; SM00130; KR; 1.
   EMBL; AF012297; AAB65760.1; -.
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                                    SHPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                              MEROPS; S01.233;
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Q9UIR7;
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10901R7
AC 0901R AC 01-MA
DT 01-MA
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C TISSUB-Ovarian carcinoma;
A ISSUB-Ovarian carcinoma;
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I ISSUB-Ovarian carcinoma;
A Buzuki Y., Nagai K., Sugano S., Ishii S., Kawai-Hio Y., Saito K.,
A Masuho Y., Ono T., Okama S., Nagahari K.,
A Masuho Y., Ono T., Okama K., Yoshikawa Y., Aotsuka S., Sasaki N.,
Hattori A., Okumura K., Iwashikawa Y., Aotsuka S., Sasaki N.,
I NEDO human cDNA sequencing project.";
I NEDO human cDNA sequencing project.";
I Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
C -: SIMILARITY: CONTAINS 1 KRINGLE DOMAIN.
C -: SIMILARITY: CONTAINS 1 CUB DOMAIN.
R EMBL; AKO75033; BAC11365.1; -.
R EMBL; AKO75033; BAC11365.1; -.
R InterPro; IPRO000859; CUB_domain.
R InterPro; IPRO000859; CUB_domain.
R Pfam; PF00431; CUB; 1.
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01-0cr-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein FLJ90552.
Hypothetical protein FLJ90552.
Bukaryota, Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                             R InterPro; IPR001314; Chymotrypsin.
R InterPro; IPR001314; Chymotrypsin.
R InterPro; IPR0013014; Pan app.
R InterPro; IPR003066; ProThrombin.
R InterPro; IPR003966; ProThrombin.
R InterPro; IPR003966; ProThrombin.
R Pfam; PF00024; Pan; 1.
R Pfam; PF00089; trypsin; 1.
R Pfam; PR00089; trypsin; 1.
R Pfam; PR00089; trypsin; 1.
R PRINTS; PR00018; RR1MGLE.
R PRINTS; PR001018; RR1MGLE.
R PRINTS; PR001018; RR1MGLE.
R PRINTS; PR001018; RR1MGLE.
R SMART; SM00130; RR; 4.
SMART; SM00130; RR; 4.
SMART; SM00130; RR; 4.
SMART; SM00120; Tryp_SPC; 1.
R PROSITE; PS0010; RRINGLE 2; 4.
R PROSITE; PS0010; RRINGLE 2; 4.
R PROSITE; PS0010; RRINGLE 2; 4.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
R PROSITE; PS01040; TRYPENIO, 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35; Indels
                                                                                                                   SEQUENCE FROM N.A.

Ruiz i Altaba A., Thery C.;
Submitted (MAY-1996) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: CONTAINS 4 KRINGLE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341 NPDGSEAPWCFTTLPGMRMAYCFQIKRCKDDVLEPDCYHG 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57 NPDNRRRPWCYVQV-----GLKPLVQECMVHDCADG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29.2%; Score 149; DB 13; 33.0%; Pred. No. 2.8e-09; iive 10; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           381 AA
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                                                                                                                                                                                                                                EMBL; US7455; AAB52574.1; -. HSSP; P00747; 1CEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 33.vv
Best Local Similarity
The 33; Conservative
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                                    Xenopodinae; Xenopus.
NCBI_TaxID=8355;
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Q8N2J4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 CYEGNGHFYRGKASTDIMGRPCLPWNSAIVLQQTYHAHRSDALQL---GLGKHNYCRNPD 59
                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Liver;
MEDLINE-9123078; PubMed=1645711;
MEDLINE-9123078; Makker S.P.;
"Identification of the rat Heymann nephritis autoantigen (GP330) as a
                              Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00130; KR; 4.
SMART; SM00443; PAN AP; 1.
PROSITE; PS00020; TYPE PS00020; TRINGLE 1; 5.
PROSITE; PS00030; KRINGLE 1; 5.
PROSITE; PS00034; KRINGLE 2; 5.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00134; TRYPSIN DOM; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
PROSITE; PS00135; TRYPSIN HIS; 1.
Glycoprotein; Hydrolase; Kringle; Protease; Signal.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Growth factor Livertine.
Xenopus laevis (African clawed frog).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11; Length 812;
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                                                                                                                                                                                                                                Bangert K., Johnsen A.H., Thorsen S.;
"Rat plasminogen: cDNA and gene structure.";
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLASMINOGEN. 8C703C51410EBC9E CRC64;
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29.3%; Score 149.5; DB 1
Best Local Similarity 37.8%; Pred. No. 2.8e-09;
Matches 34; Conservative 12; Mismatches 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor site for plasminogen.";
J. Biol. Chem. 266:10825-10829(1991).
-!- SIMILARITY. CONTAINS FRENGLE DOMAINS.
EMBL. 3AJ242649; CAB46014.1;
-HSSP; P00747; 1PMC.
HIGEPTO: IPMC01314; Chymotrypsin.
InterPro: IPMC01314; Chymotrypsin.
InterPro: IPMC013014; PAN.
InterPro: IPMC01304; PAN.
InterPro: IPMC01306; Panapp.
InterPro: IPMC01306; Panapp.
InterPro: IPMC01306; Panapp.
InterPro: IPMC01306; Panapp.
InterPro: IPMC01204; Ser_procease_Try.
InterPro: IPMC01204; Ser_procease_Try.
InterPro: IPMC01204; Ser_procease_Try.
InterPro: IPMC01204; Ser_procease_Try.
InterPro: IPMC01204; Ser_procease_Try.
InterPro: IPMC01204; PAN: 1.
Pfam; PRC00204; PAN: 1.
Pfam; PRC00204; PAN: 1.
PRINTS; PRC00195; RKINGLE.
PRINTS; PRC0195; PRCTHROMBIN.
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812 AA;
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SEQUENCE FROM N.A.
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                                                                                                                         NCBI_TaxID=10116;
                                                                                                                                                                                                          TISSUE=Liver;
         PLASMINOGEN
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